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ABSTRACT

A project was designed to measure the effects of integrating basic reading and mathematical instruction with prevocational instruction through the addition of a basic skills resource room, a technical simulation unit, and guidance and counseling to the ninth grade vocational experience program for educable mentally handicapped and disadvantaged students in four Hardin County, Kentucky, secondary schools. Research design involved pre- and posttest measurements for the investigation of 20 null hypotheses in the areas of academic achievement, self-concept, and attitude toward work concepts to determine the differences between the experimental groups (participants in the expanded program) and the control group (participants in the existing curriculum). Third party evaluation showed that for the 20 hypotheses tested, every adjusted posttest mean of the treatment groups was higher than the corresponding adjusted posttest mean for the control group (with one exception) even though all differences were not statistically significant. Greatest statistical differences were found in the arithmetic portion of the treatment, which was directly connected with the resource room. Recommendations and guidelines based on the research are suggested for use by school administrators who develop exceptional vocational education programs. Attachments and appendixes contain forms, materials, and criteria used in the study and summative evaluation. (TA)

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ED142772

DEVELOPMENT AND EVALUATION OF A VOCATIONAL EXPERIENCE CURRICULUM FOR EDUCABLE AND DISADVANTAGED STUDENTS

Ernest G. Thro
Project Director

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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To Mr. Charlie Akins, superintendent of schools, a note of appreciation is extended for his support of the project. It is hoped that this study fulfills part of his dreams and goals for the school system in providing greater opportunities for the exceptional child.

To the students, teachers and families who participated in the study, a special thank you is given. Without their assistance, there would be no study.

Ernest G. Thro
Project Director

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PROJECT SUMMARY

Since September of 1971, the Hardin County Board of Education in cooperation with the Kentucky State Department of Vocational Education has been offering an occupational work orientation and exploration program for educable and disadvantaged youth at the secondary school level. This curriculum innovation has been known as the vocational experience program. In the beginning, the original curriculum was available only at the ninth grade level. By the 1974-75 school year, a four year curriculum was available. The emerging developmental vocational experience curriculum has provided educable and disadvantaged secondary school students with a vocational program designed to provide awareness, exploration and work experiences for career development. Student enrolled in the vocational experience curriculum have made enormous progress toward becoming self-supporting and responsible citizens. Examples of this progress included reduction in the dropout rate, deescalation of discipline problems, part time employment for current students and permanent employment for recent graduates.

Under this applied research study, the present successful vocational experience curriculum at the ninth grade level was expanded through the integration of three additional components. These were: a basic skills resource room, a technical simulation unit, and guidance and counseling component. The methodology of the research design required that the experimental group of educable handicapped and disadvantaged students at the ninth grade level submit to specific attitude, personality, and intellectual measurements prior to beginning the expanded vocational experience curriculum, undergo instruction for eight months, and submit to additional forms of the same specific measurements after instruction. In this same vein, the control group of educable handicapped and disadvantaged students at the ninth grade

level were submitted to pre and post measurements, but were limited to the vocational experience curriculum. The treatment in the study was the expanded vocational experiences curriculum at the ninth grade level. The purposes of the pre and post measurements were to determine any significant differences in attitude, personality, and intellectual measurement changes between the experimental and the control group.

Specifically, the target population for the experimental group were educable and disadvantaged students at the ninth grade level in the East and West Hardin High School Districts. The control group was a matched group of ninth graders at North Hardin High School. The sexual distribution was approximately 55% male and 45% female. In terms of intellectual functioning, students had a full scale IQ of between 50 and 80 measured by the Wechsler Intelligence Scale for Children.

The objectives of this project were designed to measure the effect of the integration of a basic skills resource room, a technical simulation unit, and guidance and counseling into the vocational experience curriculum. The research design of the study called for pre and post measurements for the investigation of twenty null hypotheses generating from three major stem statements. In the first major stem statement, the difference between the experimental and control groups in terms of intellectual functioning was investigated through the use of the Wide Range Achievement Test. The second major stem statement examined the difference between the two groups in relation to personal adjustment and social adjustment as measured by the California Test of Personality. These findings were used to evaluate primarily the guidance and counseling component. The third major stem statement examined the difference between the experimental and control groups in terms of attitude change as measured by the crew

survey. This attitude instrument was developed to evaluate attitude change as a result of the present vocational experience curriculum and the technical simulation unit.

The research project, itself, will provide vocational education with several end products. First, the basic skills resource room component provided a model for the integration of special education resource rooms and special vocational education experience classes. Second, the study developed technical simulation units, in cooperation with the employers of the community, which provides color video tape presentations of the present on-the-job training stations available at the eleventh and twelfth grade level. In addition, the technical simulation unit developed examples of tailor made simulation stations that reflect Hardin County job opportunities for the target population. Finally, this project provided a valid research study which provides significant findings pertaining to the use of simulation, guidance and counseling, and basic academic skills in conjunction with proven approaches to special vocational education.

CHAPTER I

THE PROBLEM

The primary purpose of this project was to integrate basic reading and mathematical instruction with pre vocational instruction. The target population was the educable and disadvantaged students in the East and West Hardin School Districts. Through an interdisciplinary curriculum of basic and career oriented education, young people learned to succeed in vocational awareness, exploration and preparation programs of their choice, and in their career progression. The curriculum addressed itself to the economic, social and industrial problems facing secondary school educable handicapped and disadvantaged students of the school system. These problems included:

Economic Considerations

Common to all counties in this nation are economic factors that contribute to the fostering of the disadvantaged student. Hardin County, therefore, is not exception to this common factor.

The sections of the county known as East and West Hardin can be chacterized as rural America. Population is declining and poverty is on the increase. For example, 22.9% of the farming population have incomes below the federal poverty level. Educators often speak of this type of population as economically and culturally deprived. The label is accurate, for most of the youth of this area have not seen much of the outside world.

One half of the total student enrollment in the school district reside in this area. These students come from homes which reflect a rural background. The social life of the community revolves around the church, family and school. Family size is larger than the national average. Housing is generally poor throughout the district and a few homes are without the convenience of electricity and indoor plumbing. The chief industry of the

area is farming. Yet, many of the adult males also work at Fort Knox and at factories in and around Elizabethtown.

The following is a chart showing the number of low income families in each area. Percentage of low income families is 33.8% in one district and as much as 20% in other districts.

Table 1. Low income families by school districts in Hardin County.[a]

		Number of Children Residing in Attendance Area, ages 6-17 (Census)		
Name of Public School (1)	Grades (2)	Total (3)	No. From Low Income Families (estimated) (4)	Percent Col. 3+4 (5)
East Hardin High	9-12	906	80	8.8
West Hardin High	9-12	741	59	8.0
North Hardin High	9-12	1515	65	4.3
*G. C. Burkhead Elem.	1-8	935	223	23.9
*Lincoln Trail Elem.	1-8	583	96	16.5
*Lynnvale Elem.	1-8	362	121	33.4
*Howevalley Elem.	1-8	435	109	25.1
North Hardin Jr.	8-9	602	77	12.8
Parkway Elem.	1-7	881	116	13.2
Radcliff Elem.	1-7	724	166	22.9
Rineyville Elem.	1-8	497	82	16.5
*Sonora Elem.	1-8	423	141	33.3
*Upton Elem.	1-8	128	32	26.6
Vine Grove Elem.	1-7	637	150	23.7
*Western Elem.	1-8	199	55	28.1

[a]Table prepared by Federal Coordinator for ESEA, Title I
*Feeder Schools to East and West Hardin

The school system also has a large number of disadvantaged youth that are classified at the educable intellectual functioning level. Thus, these students operate under a dual handicap.

In order to overcome this dual handicap, these students must be taught a vocational program designed to provide orientation, exploration and work experiences for the world of work. In implementing such a curriculum design, no assumptions can be made pertaining to the student's previous educational experiences. In this project context, the disadvantaged child is viewed as a child who has had poor pre-school teaching/learning experiences. These experiences have not provided the skills that other children are assumed to have mastered by the time they enter a formal school situation. Therefore, performance in a learning situation in which these skills are called for will likely not be as good as that of the average or above average child.

Capitalizing on this awareness, the curriculum will provide experiences designed to develop individuals with a potential of becoming self-supporting and responsible citizens.

Social Considerations

Historically, education for the educable mentally handicapped and the low normal intelligence range has focused primarily on remedial work in the language arts and mathematics. In recent years, however, some emphasis has been placed on vocational education, on-the-job training programs, and raising the self-concept of the students. Regardless of the quality of these programs, the majority of these curriculums have been designed for the elementary and middle school years, since most of the subjects became school dropouts. For the most part, these same programs have emphasized subordinate rather than contributing roles for these students in the American society. Most of these programs have been fragmented efforts with very little emphasis on developing individuals with a potential of becoming self-supporting and responsible citizens.

The program design for these curriculums, for the most part, were created in isolation from the real world that these children would

eventually have to enter. Thus, no provision was made for these students to interact with the outside world. In many cases, it was felt that the students had insufficient cognitive development to actually participate in the curriculum planning. Thus, many of these students have traditionally departed from school at age sixteen and eventually became welfare recipients. Finally, the majority of these programs have been designed for urban youth with the rural student being deprived of any type of instruction. Yet, many of these same deprived youth in the past have journeyed to the urban centers of this country and have been unable to cope with their new environment.

Community Considerations

A recent survey of the seven major industries in Hardin County indicated that the local employer wanted all youth to be trained in three areas. These are positive attitudes toward self and the world of work, adequate grounding in fundamental mathematics, and basic reading and writing skills.

Probably no area in the educational program for educable children is more important than that which concerns itself with preparing youth to adjust successfully to the demands of employment. Life adjustment is extremely difficult, if not impossible, unless occupational adjustments occur. The development of a school program that aids occupational adjustments for the educable student is a necessity. In order to develop an effective occupational education program, it is necessary for the teachers to realize a number of specific problems that the educable student is going to face in learning to hold down a job. Fortunately, teachers can draw from a wealth of experiences and research concerned with the occupational adjustment problems of disadvantaged and handicapped students. These findings can be used to give directions to the kinds of experiences which should be included in the school program.

Related Research

Research has proven that the students in vocational experience programs are usually employed in jobs which may be classified as unskilled or semi-skilled. In terms of curriculum development, this means that the jobs that students can hold successfully consist of operations that need to be taught through work experience programs. This implies that, if a school's occupational program for educable students is to be effective, it must provide actual experience in job situations. Research has also indicated that the educable student, given an opportunity, can and does make good occupational adjustments.

The biggest job of the teacher in training these students to hold their jobs is the teaching of the positive personality traits, such as: (1) the ability to get along with co-workers; (2) High job interest; (3) a desire for more than adequate performance; (4) dependability; and (5) the ability to accept criticism cheerfully.

These are the personality characteristics which a good program for educable students should endeavor to develop if the curriculum is to prepare pupils to take their places successfully in the world of work. It has been proven that seldom is the poor occupational adjustment of the educable students due to his inability to perform a semi-skilled job. Rather, poor occupational adjustment is usually due to undeservable personality factors, such as: (1) lack of punctuality; (2) excessive absenteeism; (3) indifference; (4) inability to assume responsibility; (5) unreliability; and (6) inability to respond to and carry out directions.

In recent years, the public schools have endeavored to develop remedial reading and mathematical programs for secondary school youth. The programs, for the most part, have been designed to assist the student who is functioning in the low normal intellectual range or who is an underachiever.

Because of a lack of financial support, the educable mentally handicapped student has been thrust into programs of remedial education that still do not meet their needs.

A report issued by The President's Committee on Mental Retardation and The President's Committee on Employment of the Handicapped[1] documents the need for the United States to provide equal citizenship to the mentally retarded by means of appropriate education, training, rehabilitation and employment. These committees are putting forth maximum effort to inform employers of the mentally retarded as a valuable manpower resource. A later report from the Committee on Employment of the Handicapped[2] included the fact that 93% of the more than 6,000 mentally retarded men and women hired by the federal government have been successful in their jobs even though 2/3 of them had not been previously employed.

A follow-up study of 129 mentally retarded pupils who had been involved in an occupational educational workstudy program in the Wilmington Public Schools[3] revealed that 54% of the pupils were in service occupations, and

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[1]President's Committee on Mental Retardation, The; and The President's Committee on Employment of the Handicapped, These, too, Must be Equal: America's Needs in Habilitation and Employment of the Mentally Retarded, (Washington, D.C., 1969).

[2]President's Committee on Employment of the Handicapped, The; Nine Years of Progress: Employment of the Mentally Retarded and Mentally Restored, Washington, D.C., 1970), p.3.

[3]R.A. Reiter, "Follow-up Study of Occupational Education Work-Study Program Leavers," (Wilmington, Delaware: Public Schools, 1967), pp. 2-10.

that 50% or better of the pupils received above the minimum wage, were promoted, and/or were employed full time. 2% received welfare payments, 10 were in the armed forces, and 124 were taxpayers. Charles Kokaska,[4] in reviewing follow-up studies, supports the findings that with the proper educational background and vocational training, the mentally retarded are capable of moving through a number of work situations, often increasing their work skills.

In another area, Oliver Kilstoe, evaluating the results of the Employment Evaluation and Training Project at Southern Illinois University, suggest that the crucial factors determining the mentally retarded person's suitability to the world of work is the development of personal, social and vocational skills rather than academic skills.[5] Philip Chin contends that on-the-job training experiences are probably the most valuable aspects of education for the mentally retarded person.[6] Chin suggests that as many different placements as possible should be available in unskilled and skilled tasks and in sheltered workshops and competitive work situations.

In summary, programs of occupational preparation for the mentally retarded have been carried out with reasonably good success in public schools and elsewhere. The conclusions drawn by researchers, reviewers and special committees concerned with the subject indicate strong support for programs that have as their goal the occupational self-sufficiency of the mentally retarded.

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[4]Charles J. Kokaska, "The Occupational Status of the Educable Mentally Retarded: A Review of Follow-up Studies.

[5]Oliver P. Kolstoe and Roger M. Frey, A High School Work-Study Program for Mentally Subnormal Students (Illinois: Southern Illinois University Press, 1969) pp. 39-49.

[6]Philip C. Chin, "The Habilitation of the Educable Mentally Retarded through High School Work-Study Programs," Teaching the Educable Mentally Retarded, ed. Harold D. Love, (Berkeley, California: McCutchan Publishing, 1968) pp. 291-312.

CHAPTER II

GOALS AND OBJECTIVES

The project strove to produce positive change in the cognitive and affective skills of youth exposed to the program. Under the applied research study, educable handicapped and disadvantaged students at the ninth grade level were submitted to specific attitude, personality and intellectual measurements during the first month of school and to alternate forms of the same specific measurements during the last month of school. The methodology of the research design required that the experimental group of educable handicapped and disadvantaged students at the ninth grade level submit to the specific measurements prior to beginning the expanded vocational experience curriculum, undergo instruction for eight months, and submit to alternate forms of the same specific measurements after instruction. In this same vein, the control group of educable handicapped and disadvantaged students at the ninth grade level were submitted to pre and post measurements, but did not participate in the expanded vocational experience program. In this respect, the purposes of the pre and post measurements were to determine the significant difference, if any, in the cognitive growth and affective change of the experimental group and the control group. The treatment in the study was the expanded vocational experiences curriculum at the ninth grade level.

Under this applied study, the present vocational experience curriculum at the ninth grade level was expanded through the integration of three additional components. These components are (1) resource room teacher(s), (2) technical simulation units, and (3) guidance and counseling. The following is a list of the objectives pertaining to the present vocational experience curriculum and the three new components.

Vocational Experience Curriculum Objectives

A. Process Objectives:

1. To provide an awareness, exploration and preparation program for the ninth grade student in terms of the world of work.

2. To provide a program that will help develop non-technical skills habits and attitudes which are necessary for successful and continued employment.

B. Performance Objectives

1. Students will be able to direct their own behavior.

2. Students will be able to value the peer relationship and classroom environment enough that they demonstrate the behavior of self-discipline students.

3. Students will be able to understand the need for punctuality.

4. Students will be able to demonstrate through their behavior the ability to be punctual.

5. Students will be able to complete the ninth grade program.

6. Students will be able to value class attendance enough to remain enrolled in school on a regular basis.

7. Students will be able to understand the need for basic courtesy.

8. Students will be able to demonstrate through their behavior basic courtesy toward their teachers and peers.

9. Students will be able to understand the basic rules governing personal hygiene and appearance.

10. Students will be able to value the need for personal hygiene enough to display at all times proper dress and good grooming.

11. Students will be able to collect and evaluate information concerning their personal behavior.

12. Students will be able to demonstrate proper behavior within the school environment. Behavior outside of the school setting will also demonstrate the same classroom learnings.

13. Students will be able to understand the basic need for cooperation with their peers and instructors.

14. Students will be able to value the need for cooperation enough to demonstrate their spirit of cooperation through their action.

15. Students will be able to understand and follow oral and written directions framed in the vocabulary at the fifth grade level.

16. Students will be able to demonstrate through the satisfactory completion of assigned tasks the ability to follow oral and written directions.

17. Students will be able to understand the need for work.

18. Students will be able to demonstrate their appreciation of work by performing satisfactorily the classroom jobs.

19. Students will be able to see the relationship between classroom learnings and the world of work.

20. Students will be able to demonstrate through field trips, class discussion and reality testing situations the relationship between classroom learnings and the world of work.

21. Students will be able to identify five jobs that they could perform satisfactorily in the future.

22. Students will be able to demonstrate through the use of resource materials and self-evaluation forms the ability to select five jobs that they could perform satisfactorily in the future.

Resource Room Objectives

A. Process Objective:

1. To provide a comprehensive program in learning activities such as reading, writing and computing in the ninth grade with career related experiences based on the development levels of the student.

B. Performance Objectives:

1. The students' motivation and achievement related to basic education skills will be improved.

2. The students will learn to perceive themselves realistically in their immediate environment and begin to identify with workers in the broader environment.

3. The students' attitude and self-concept will be improved.

4. The students will become aware of the many sources of information in the world of work and of ways to obtain and use this information.

Technical Simulation Unit Objectives

A. Process Objectives:

1. To help develop technical skills needed to hold a job.

2. To provide the student the opportunity to explore different technical skills needed for different jobs.

B. Performance Objectives:

1. Students will develop an awareness that different workers need varying skill preparation for success.

2. Students will gain an understanding and appreciation for satisfactions gained from their work experiences.

3. Students will become aware that there is value in work. In this context, work provides an opportunity for individuals to enhance their own dignity and worth.

4. Students will have made tentative career decisions by the time they complete the ninth grade with the knowledge that they can revise or change this decision.

Guidance and Counseling Objectives

A. Process Objectives:

1. To integrate a program of guidance and counseling that is appropriate to the developmental level of the students which will help improve their self-concept and self-understanding.

2. To serve as a liaison person and uniting factor among the resource teacher, vocational experience teacher, regular classroom teachers, parents and the community employers.

B. Performance Objectives:

1. Students will expand their knowledge of themselves and their work environment.

2. Students will develop a positive self-attitude and a positive work attitude.

3. Parents will develop a realistic positive attitude toward their child and his future career.

4. There will be a reduction in the dropout rate of students due to school dissatisfaction.

CHAPTER III

DESIGN AND PROCEDURES

This project was designed to provide supportive help to an existing and successful ninth grade vocational experience program at East Hardin High School, located at Glendale, Kentucky and West Hardin High School located at Stephensburg, Kentucky. The following provides a brief overview of representative student abilities at the two schools.

East Hardin

RANGE		Eighth Grade	Ninth Grade	Tenth Grade	Eleventh Grade	Twelfth Grade	TOTAL	
IQ	National Percentile						Number	Percent
Over 124	Over 94			2	7		9	2.2
117-124	85-94			13	6		19	4.4
109-116	70-84			34	28		62	14.9
92-108	31-69			107	92		199	48.1
84-91	16-30			34	33		67	16.1
76-83	6-15			14	24		38	9.1
Below 76	Below 6			5	15		20	4.7
TOTAL				209	205		414	100.5

West Hardin

RANGE		Eighth Grade	Ninth Grade	Tenth Grade 74-75	Eleventh Grade	Twelfth Grade	TOTAL	
IQ	National Percentile						Number	Percent
Over 124	Over 94			6			6	3.2
117-124	85-94			10			10	5.3
109-116	70-84			12			12	6.7
92-108	31-69			94			94	50.0
84-91	16-30			31			31	16.5
76-83	6-15			22			22	11.7
Below 76	Below 6			13			13	6.9
TOTAL				188			188	100.3

Overview

During the three school years 1971-1974, the three secondary schools in Hardin County have been offering a pilot program for educable mentally handicapped students. Heretofore 100 students have been served by the program. The major purpose of the vocational experience curriculum has been to provide educable mentally handicapped secondary school students with a vocational program designed to provide orientation, exploration, and work experiences for the world of work. The final objective of the program was to develop individuals with a potential of becoming self-supporting and responsible citizens.

The primary purpose of this project was to integrate basic reading and mathematical instruction with the present ninth grade vocational experience program. Secondary purposes included providing additional simulation and reality testing experiences for the present ninth grade vocational experience program, developing structured interview techniques and appropriate Likert Scales to measure and evaluate the present program of vocational experiences and implementing a comprehensive system of guidance, counseling, placement and follow-through services for youth enrolled in the vocational experience program.

The target population for this project was the educable and disadvantaged students in the East and West Hardin School Districts. Through an inter-disciplinary curriculum of basic and career oriented education, young people learned to succeed in vocational awareness, exploration and preparation programs of their choice, and in their career progression. The curriculum addressed itself to the economic, social and industrial problems facing secondary school educable handicapped and disadvantaged students of the school system.

This project was part of the research program supported with federal funds under Section 131(a) of Part C of the Vocational Education Act. The objectives of this project were designed to provide vocational education with an applied study pertaining to:

1. The required types of curricula and instructional materials that are needed for ninth grade disadvantaged and educable youth in open entry-exit situations;

2. The necessary information, organizational requirements and administrative arrangements to initiate and operate demonstration activities for ninth grade disadvantaged and educable youth in order that the innovation will remain when outside sources of funds are no longer available.

3. The implementation of a comprehensive system of guidance, counseling, placement and follow-through services for ninth grade disadvantaged and educable youth.

Research Design

Under the applied research study, educable handicapped and disadvantaged students at the ninth grade level were submitted to specific attitude, personality and intellectual measurements during the first month of school and submitted to additional forms of the same specific measurements during the last month of school. The methodology of the research design required that the experimental group of educable handicapped and disadvantaged students at the ninth grade level submit to the specific measurements prior to beginning the expanded vocational experience curriculum, undergo instruction for eight months, and submit to additional forms of the same specific measurements after instruction. In this same vein, the control group of educable handicapped and disadvantaged students at the ninth grade level at North Hardin School were submitted to pre and post measurements, but did not participate in the expanded vocational experience program. Rather, the control group received the present vocational experience curriculum without the additional supportive instructional components. The purposes of the pre and post measurements were to determine the significant difference, if any, in attitude, personality and intellectual measurement changes between the experimental and the control group. The treatment in the study was the expanded vocational experiences curriculum at the ninth grade level.

Employing a pre and post research design, the school system investigated the effects of three additional educational components to the present vocational experience curriculum in terms of personality, intellectual and attitude functioning.

The Basic Program

The occupational work orientation and exploration program for educable and disadvantaged youth of the Hardin County Schools had its beginning in the 1971-1972 school year. The secondary schools involved in the original pilot program were East Hardin High School, located at Glendale, Kentucky and West Hardin High School, located at Stephensburg, Kentucky. During the first year of the pilot program, James Owensby, the instructor, provided the initial ninth grade program.

For the school year 1972-73, the preoccupational program was in the three secondary schools serving the Hardin County System. The original two pilot schools offered both the ninth and tenth grade programs, while North Hardin High School offered only the first year program. In total, all three high school centers served approximately 60 educable mentally handicapped students.

During the 1973-74 school year, the Hardin County Board of Education continued the present ninth and tenth grade program in all three secondary schools and began to develop a pilot program for educable students at West Hardin High School in grades 11 and 12.

Students enrolled in the eleventh and twelfth grade programs have had the option of enrolling in a vocational experience curriculum leading to a high school diploma. The following table illustrates this curriculum.

Table 1. The Vocational Experience Curriculum

Ninth Grade	
Elective	1 unit
Vocational Experience I	1 unit
Health and Physical Education	1 unit
English	1 unit
Math 9	1 unit
TOTAL	5 units

Tenth Grade	
Elective	1 unit
Vocational Experience II	1 unit
General Science	1 unit
Math 10	1 unit
English	1 unit
TOTAL	5 units

Eleventh Grade	
Vocational Education with the Component of On-The-Job Training	2 units
Phase Elective History	1 unit
Phase Elective English	1 unit
Science Elective	1 unit
TOTAL	5 units

Twelfth Grade	
Social Studies Elective	1 unit
Elective	1 unit
Co-op Vocational Experience	2.5 units
TOTAL	4.5 units

GRAND TOTAL	19.5 units

During the eleventh grade of school, students were scheduled into a three hour block of time. The first nine weeks of the program consisted of all students enrolling in an exploratory course pertaining to the ten occupational stations available to them through the on-the-job training program. The instructor of the course served as the teacher-coordinator of the program. The last three remaining quarters consisted of all students receiving on-the-job training in jobs selected from the ten occupational stations. Students received one hour of classroom instruction each day during the remaining twenty-seven weeks. In addition, each student received one hour of on-the-job training each day of the twenty-seven weeks. Students did not begin their on-the-job training program until the teacher-coordinator and the job supervisors felt that the student was ready for the experience. Thus, some students were not able to complete twenty-seven weeks of training. At the end of the eleventh grade experience, the students selected the one job that they wished to be in the twelfth grade co-op program.

During the 1974-75 school year, the Hardin County Board of Education continued the present program of studies and implemented the cooperative component in the twelfth grade at West Hardin High School.

On July 1 of 1975, the Hardin County Board of Education received a $29,902 grant from the Office of Health, Education and Welfare. The project was entitled "A Research Project for Expanding the Present Vocational Experience Curriculum." This project has endeavored to revise the ninth grade vocational experiences curriculum through the use of three components. These components are a basic skills resource room, a technical simulation unit and guidance and counseling.

The Skills Resource Room

Students with special needs have for decades been removed from the mainstream of society and education and have been placed in special contained rooms - even institutions. We, as educators, are guilty of this by creating the "Last Car Child".

> "When there is a collision, the last car of the train is usually damaged most. So they have decided that it will be best if the last car is always taken off before the train starts. What is foolish about that?" (Verbal Absurdities IV, an Item at Year XI of Form L-M of the Stanford-Binet Intelligence Scale)

Efforts to decrease heterogenity by removing groups of students from the mainstream of education have not been successful. Any group of students, no matter how carefully selected is characterized by great variability along many dimensions.

Educators have discovered that there always seems to be a "last car" group of students, and many of these students become casualities of our educational system. These casualities of our educational system have also been labeled. Once labeled, the student obeys a fundamental law of human behavior. This law is:

"The social performance of an individual is largely determined by the audience's expectations." (Dr. Braginsky - Psychology Today, September, 1974)

Labeled retarded or slow, the student plays his role.

Recognizing that variability within the classroom can be eliminated only when all students are removed, we, as educators, now realize the harm of labeling and segregating students. The resource room approaches the student with special needs as an individual without isolating or labeling him.

The student needs individual diagnosis, individual prescriptive teaching, in short -- individualization in his education.

B. Operation

Any student receiving help in the basic skills resource room was also enrolled in the expanded vocational experience program. Outside of these two special educational experiences, the student stayed in the mainstream of the school. While in the resource room, students received individual help in small group settings. (8-10 students)

The basic areas of concentration in the resource room were reading, writing, basic mathematics, language development, positive self-attitude development and school work skills. The primary concern was the behavior of the individual student. Each student was provided with an individualized curriculum based on his present behavior. This curriculum focused on the student's potential for growth.

In order to decide the individual student's curriculum, the resource teacher must be able to diagnose and prescribe the student's behavior. The teacher must know what the student can already do, what next to teach and how to teach it. This is done by giving additional diagnostic tests in the needed skills area.

After diagnosing each student's problem, the teacher must prescribe a program. The teacher prescribes by writing specific objectives and checking them off as the student masters the task.

The student's self-attitude and school behavior will automatically improve with his academic success. Each student will succeed academically, because the curriculum has been prescribed on his present behavior and the student's realistic potential to grow.

The resource teacher must approach the individual student in an honest realistic manner. The student will be able to see himself as he is, what he can do and what he can learn to do. He will be able to evaluate himself as he progresses because of the resource room teacher's specific approach in the skill building areas.

Technical Simulation Unit

Since September of 1971, the school system has maintained a vocational experience program for educable and disadvantaged youth. The revised curriculum incorporates new teaching strategies developed by the Curriculum Development Center for Kentucky. In June of 1974, this curriculum center issued its "Orientation to the World of Work" series. These units were designed for special vocational education teachers. There are ten units in the series:

1. Introduction - Orientation to the World of Work
2. Occupational Safety
3. Learning About Jobs
4. Getting a Job
5. How to Keep a Job
6. Personal Development
7. Self-appraisal for Employment
8. The Role of Work in Our Society
9. Taxes Affecting the Worker
10. Handling Your Paycheck

The technical simulation unit was designed to develop additional simulation and reality testing experiences for the present ninth grade vocational experience program. In specific, these simulation exercises provided hands-on

experiences of existing work stations at the 11th and 12th grade level. After careful examination of possible simulation units, the professional staff developed the following six simulation units:

1. Restaurant Unit
2. Assembly Work Unit
3. Motel Unit
4. Money and Banking Unit
5. Service Station, Moving Van and Truck Driving
6. Sales and Grocery Unit

The basic framework for the implementation of the technical simulation units has been twice weekly presentations covering a period of one month for each simulation experience. Every effort was made to develop appropriate material for the revised vocational experience curriculum which was compatible with the simulation units.

Table 2. Illustrated calendar for the technical simulation units.

	PROJECT SCHOOL AND SIMULATION PROGRAM	
	EAST HARDIN	WEST HARDIN
October 13, 1975- November 7, 1975	Restaurant Unit	Restaurant Unit
November 10, 1975- November 14, 1975	Staff Evaluation	Staff Evaluation
November 17, 1975- December 12, 1975	Assembly Work Unit	Assembly Work Unit
December 15, 1975- December 19, 1975	Staff Evaluation	Staff Evaluation
January 5, 1976- January 30, 1976	Motel Unit	Money and Banking Unit
February 2, 1976- February 6, 1976	Staff Evaluation	Staff Evaluation
February 9, 1976- March 5, 1976	Money and Banking Unit	Motel Unit
March 8, 1976 March 12, 1976	Staff Evaluation	Staff Evaluation
March 15, 1976- April 9, 1976	Service Station, Moving Van and Truck Driving Unit	Sales and Grocery Unit
April 12, 1976- April 16, 1976	Spring Vacation	Spring Vacation
April 19, 1976- April 14, 1976	Sales and Grocery Unit	Service Station, Moving Van and Truck Driving Unit
May 17, 1976- May 21, 1976	Staff Evaluation	Staff Evaluation

The actual simulation unit employes the following teaching strategy:

1. Day One - General orientation and discussion of simulation unit
2. Day Two - Resource Leader from the world of work
3. Day Three - Practice, reinformcement and discussion
4. Day Four - Practice, reinforcement and discussion
5. Day Five - Practice, reinformcement and discussion
6. Day Six - Preparation for field trip
7. Day Seven - Field Trip
8. Day Eight - Discussion of field trip and evaluation

In addition to the previously mentioned simulation units, ten color video tapes were produced as a supplement to the curriculum. These included:

1. Restaurant Work. . . . . Windmill Restaurant
2. Assembly Line. . . . . .Gates Rubber
3. Banking - Part I . . . . . Citizens Bank
4. Banking - Part II. . . . . First Hardin Bank
5. Insurance. . . . . Skees Insurance
6. Custodial Services . . . . . Hardin County Schools
7. Truck Driving. . . . . .Big "T" Truck Stop
8. The Job Interview. . . . . .Kentucky Office Products
   Windmill Restaurant
9. Sales. . . . . .Big K Department Store
10. Motel. . . . . Holiday Inn South
    Howard Johnson

Guidance and Counseling

In order to implement a comprehensive system of guidance, counseling placement and follow-through services for youth enrolled in the vocational experience program, a full time guidance counselor was added to the staff. The guidance counselor worked personally with the student and acted as the uniting force connecting the family, the community and the teaching staff.

The counselor focused on the task of assisting the educable and disadvantaged youth in making career decisions and planning approaches to implement these decisions. Placement activities pertaining to future on-the-job training stations were emphasized. Because so many educable and disadvantaged students are potential dropouts, special attention was focused on follow-through with the home.

In terms of the revised Vocational Experience Curriculum, the counselor provided a series of twice monthly group guidance programs. This curriculum

integration component has three thrusts. These were (1) orientation to the school and community; (2) career development; and (3) placement activities pertaining to the school and future on-the-job training stations. In order to fully document the activities of the counselor, a formal documentation system was developed. This system included the following forms.

1. Name _____
   Last First Middle
2. Date of Birth _____
   Month Day Year
3. School Attending _____
4. Home Address _____
5. Phone _____
6. Full Name of Father _____
   Living_____ Dead _____
   Address of Father _____
   Place of Employment _____
7. Full Name of Mother _____
   Living_____ Dead _____
   Address of Mother _____
   Place of Employment _____
8. Present School Schedule

Class	Teacher	Grades by Quarters 1	2	3	4	Yr
1.						
2.						
3.						
4.						
5.						
6.						

9. Give below names and ages of brothers and sisters and any other under 18 living in family. Include servants and boarders under 18 and all children under school age.

Name	Date of Birth	School Attending (Use Pencil)	Grade (use Pencil)	If not in School Give Reason

10. Summary of Counseling Visitations

11. Health Comments

12. General Comments:

PROJECT EXPANSION
COMPOSITE SHEET

NAME _____

ADDRESS _____

PHONE _____ BIRTHDATE _____

SCHOOL _____

PRE TEST DATE _____ POST TEST DATE _____

CONTROL GROUP _____ PROJECT GROUP _____

I. Individual IQ _____ Form _____ Date of Testing _____

II. Wide Range Achievement Test - Date of Testing _____

A. Reading Score _____ Grade _____
Standard Score _____ Percentile _____

B. Spelling Score _____ Grade _____
Standard Score _____ Percentile _____

C. Arithmetic Score _____ Grade _____
Standard Score _____ Percentile _____

III. Self-Concept Measurements - Form _____ - Date of Testing _____

A. Personal Adjustment

Area	Raw Score	Percentile
1. Self-Reliance	_____	_____
2. Sense of Personal Worth	_____	_____
3. Sense of Personal Freedom	_____	_____
4. Feeling of Belonging	_____	_____
5. Freedom from Withdrawing	_____	_____
6. Freedom from Nervous Symptoms	_____	_____
TOTAL PERSONAL ADJUSTMENT	_____	_____

B. Social Adjustment

1. Social Standards	_____	_____
2. Social Skills	_____	_____
3. Freedom from Anti-Social Tendencies	_____	_____
4. Family Relations	_____	_____
5. School Relations	_____	_____
6. Community Relations	_____	_____
TOTAL SOCIAL ADJUSTMENT	_____	_____

C. Crew Survey

Career Education and Work	_____	_____
General Education	_____	_____

CHAPTER IV

RESULTS AND ACCOMPLISHMENTS

Overview

This research project was based upon an expansion of those elements which have been demonstrated as being effective and which are currently deemed essential to the effective development in the vocational experience curriculum. During the past three years, students enrolled in the vocational experience program have made enormous progress toward becoming self-supporting and responsible citizens. Examples of this progress include:

1. The dropout rate among these students has dropped from 50 percent to 5 percent.
2. Discipline problems among this group have been reduced.
3. Seventy-two percent of the recent graduates of the program are fully employed.
4. All eighteen of the current enrolled students in the third year program are presently employed on a part-time basis.

Yet, the present vocational experience curriculum at the ninth grade level was improved through the integration of basic reading and mathematical skills provided through the learning resource room. In addition, simulation and reality testing experiences developed at the ninth grade level through the implementation of a technical simulation unit provided hands-on experiences of actual working conditions of the on-job training stations available at later phases of the present vocational experience program. Finally, a full-time guidance counselor working only with the experimental group fostered the development of a comprehensive system of guidance, counseling, placement and follow through services for ninth grade disadvantaged and educable youth.

Through the implementation of this project, the following results and benefits were derived:

1. This project provided a model for the integration of special education resource rooms and special vocational education experience classes;

2. This project developed a series of technical simulation units, in cooperation with the employers of the community, which provided tailor made simulation stations that reflected Hardin County job opportunities;

3. This project implemented a valid research study which provides significant findings pertaining to the use of simulation, guidance and counseling, and basic academic skills in conjunction with proven approaches to special vocational education.

Internal Evaluation of the Curriculum

Students enrolled in the project program were evaluated on a monthly basis using the evaluation procedures developed for measuring the objectives. A satisfactory score has been recorded for all students who had a mean score of 2.50 on the various instruments.

At the present time, the project staff has completed descriptive satistical data pertaining to the internal evaluation of the curriculum for the period of October 13, 1975 through November 14, 1975. Table Three summarizes the teacher observations made by James Owensby of West Hardin High School and Tony Nunn of East Hardin High School. Table Four summarizes the performance checklist data completed by the technical simulation teacher aide. This data was especially significant, since Betty Roberts, the teacher aide, completed the observations at both research sites. Thus, the performance checklist data reflect the evaluation efforts of the same person at both project schools. Copies of the evaluation forms and the evaluation criteria employed in this study follow these tables.

Table 1. Summary of data from teacher observation form.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS		
		West Mean N=38	East Mean N=14	Combined N=52
1. Out-of-Seat-Behavior- (See Directions for Charting Behavior)	5 4 3 2 1	4.45	3.00	4.06
2. Inappropriate Verbalization- (See Directions for Charting Behavior)	5 4 3 2 1	4.05	3.14	3.73
3. Profanity - (See Directions for Charting Behavior)	5 4 3 2 1	4.95	4.86	4.35
4. Punctuality - See Directions for Charting Behavior)	5 4 3 2 1	4.05	4.07	4.06
5. Defacing Classroom Property- (See Directions for Charting Behavior)	5 4 3 2 1	5.00	5.00	5.00
6. Awareness: The student exhibited an awareness that different workers need varying skill preparation for success.	5 4 3 2 1	3.97	3.14	3.75
7. Awareness: The student exhibited an awareness of the requirements needed to complete the simulation unit.	5 4 3 2 1	3.97	3.35	3.81
8. Awareness: The student completed the basic skills for the simulation unit.	5 4 3 2 1	3:97	3.07	3.73
9. Attendance: The student had satisfactory attendance.	5 4 3 2 1	4.13	3.93	4.08
10. Personal Courtesy: The student practiced basic courtesy to adults and peers.	5 4 3 2 1	4.76	3.07	4.31
11. Personal Hygiene: The student practiced positive personal hygiene habits.	5 4 3 2 1	4.84	3.29	4.42
12. Self-Concept: The student exhibited through his behavior growth in terms of a positive self-concept.	5 4 3 2 1	3.97	2.86	3.67
13. Cooperation: The student demonstrated a satisfactory level of cooperation with their peers and adults.	5 4 3 2 1	4.21	2.64	3.76

Table 1 (continued)

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS		
14. Communication Skills: The student was able to understand and follow oral and written directions.	5 4 3 2 1	4.11	2.93	3.79
15. Appreciation of Work: The student demonstrated an appreciation for work by performing satisfactorily the classroom jobs.	5 4 3 2 1	4.87	3.07	4.38
TOTAL RAW SCORE		65.30	51.42	60.93
MEAN SCORE (Divide Raw Score by 15)		4.35	3.43	4.06

Table 2. Summary of data from performance checklist.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS		
		West Mean N=38	East Mean N=14	Combined N=52
1. Awareness: The student understood the basic skills required for the simulation unit.	5 4 3 2 1	3.37	3.71	3.46
2. Preparation: The student completed the preparation exercises for the basic skills required for the simulation unit.	5 4 3 2 1	3.24	3.21	3.23
3. Work Requirements: The student demonstrated his understanding of the work requirements needed for the simulation unit.	5 4 3 2 1	3.37	3.36	3.37
4. Laboratory Experiences: The student worked well with his peers during the simulation unit.	5 4 3 2 1	3.24	3.36	3.27
5. Laboratory Experiences: The student demonstrated leadership roles during the simulation unit.	5 4 3 2 1	2.05	2.29	2.12
6. Laboratory Experiences: The student completed the practice trials required for the simulation unit.	5 4 3 2 1	2.71	3.14	2.83
7. Laboratory Experiences: The student assisted his fellow workers during the simulation unit.	5 4 3 2 1	2.29	2.50	2.35
8. Laboratory Experiences: The student asked meaningful questions during the simulation unit.	5 4 3 2 1	2.42	2.79	2.52
9. Laboratory Experiences: The student demonstrated the ability to move the fingers and manipulate small objects with the fingers during the simulation unit.	5 4 3 2 1	3.50	3.36	3.46

Table 2. (continued)

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS		
10. Laboratory Experiences: The student demonstrated the ability to move the hands easily and skillfully.	5 4 3 2 1	3.42	2.79	3.25
1. TOTAL RAW SCORE		29.61	30.51	29.86
2. MEAN SCORE (Divide Raw Score by 10)		2.96	3.05	2.99

Development of the CREW Survey

As one of the goals of the project, an instrument was to be developed to measure the attitude change of the students as they progressed through the program. The actual development of the instrument began on Friday, June 18, 1975. At that time, a panel of psychometric educators began the process that ultimately became the CREW Survey. This panel of educators included:

1. Dr. Kenneth Joy - Chairman of the Department of Educational Psychology - Ball State University
2. Dr. B. Glen Davis - Bureau of Vocational Education - State Department of Education
3. Dr. Stephen Schnacke - Associate Professor of Counselor Education - Western Kentucky University
4. Dr. Ernest G. Thro - Project Director - Hardin County Board of Education
5. Mr. Milton Pearson - Hardin County Board of Education - Individual Test Examiner

Employing a Likert Scale, this panel of experts developed the 31 item survey known as the CREW. The Crew Survey endeavors to measure the student's attitudes toward career education and general education. Face validity of the instrument was obtained by constructing the items solely from the theoretical framework of the performance objectives. Content validity was present in the instrument because of the following:

1. The instrument used in this study was designed using the theoretical framework of the performance objectives.

2. The instrument used in the study was developed through a simple content analysis. This simple content analysis was obtained during the week of July 21st. In total, ten individuals were asked to classify each word phase under either the career education domain or the general education domain.

During the month of July, Milton Pearson of the Hardin County Board of Education developed the instructions for the Crew Survey.

In August of 1975, a video tape was made of the test instructions. This color video tape could be used for demonstrations pertaining to the project.

Reports from the third party evaluation team indicate that the instrument has great potential for obtaining useful data from this special needs population. An examination of the thirty-one inventory items revealed that 24 of the 31 items were excellent in terms of such factors as standard deviation and correlation to the total score. Items 2, 6, 7, 10 13, 22 and 31 are considered to be questionable.

Table 3. Summary of item statistics on the CREW Survey.

ITEM NUMBER	MEAN	S.D.	CORRELATION TO TOTAL SCORE
1	4.28	.92	.57
2	4.65	.87	.34
3	3.17	1.20	.43
4	4.13	.94	.46
5	3.15	1.02	.48
6	4.71	.61	.47
7	4.24	1.00	.37
8	3.10	1.26	.41
9	4.22	.75	.51
10	4.58	.73	.32

Table 3. (continued)

ITEM NUMBER	MEAN	S.D.	CORRELATION TO TOTAL SCORE
11	4.17	.87	.50
12	4.27	.83	.67
13	4.06	1.09	.25
14	3.55	1.14	.59
15	4.06	.81	.52
16	4.05	.94	.37
17	3.13	1.25	.55
18	4.19	.94	.55
19	4.22	.73	.54
20	3.53	1.29	.43
21	4.45	.70	.67
22	4.56	.64	.54
23	4.12	.85	.29
24	3.59	.99	.49
25	4.22	.82	.58
26	4.22	.92	.61
27	3.87	1.21	.40
28	3.49	1.28	.47
29	4.05	1.06	.51
30	4.35	.83	.62
31	3.65	1.36	-.06
TOTAL TEST	124.03	13.55	---
AVERAGE	4.00	.96	.47

In addition, the third party evaluation research staff completed a factor analysis of the instrument. Tables six and seven illustrate the results of this data.

Table 4. Item Loadings by Factor on the CREW Survey

Factor 1 - In School Activities

ITEM	FACTOR LOADING
3. Doing Class Projects	.57
8. Going To My Classes	.78
17. Following School Rules	.61
20. Getting To Class On Time	.63
27. Staying In School	.60
28. Doing My School Assignments	.85

Factor 2 - Interpersonal Relationships

ITEM	FACTOR LOADING
19. Working With Other Students In School	.52
*22. Coming To Work In Clean Clothes	.31
24. Talking With Teachers	.64
25. Telling Other People About My Jobs	.55
30. Helping Other People	.54

Factor 3 - Job Related or Job Activities

ITEM	FACTOR LOADING
10. Being Proud Of My Jobs	.58
12. Learning How To Do A New Job	.52
13. Working With Tools	.45
29. Working Hard	.60

Factor 4 - Reward

ITEM	FACTOR LOADING
2. Earning Money	.63
6. Going On Field Trips	.53

Factor 5 - Educational Skills for Work

ITEM	FACTOR LOADING
4. Working With My Hands	.46
7. Saving Money	.55
23. Talking About Different Kinds of Jobs	.53

*Item 22 loaded weakly on factors 2, 6 and 7

Table 4. (continued)

Factor 6 - Work Discipline

ITEM	FACTOR LOADING
1. Looking For A Job	.50
9. Learning To Make Change	.54
14. Learning Work-Safety Rules	.59
21. Being On Time for Work	.62
*22. Coming To Work In Clean Clothes	.30
26. Doing What The Boss Says	.76

Factor 7

ITEM	FACTOR LOADING
16. Using A Cash Register	.61
*22. Coming To Work In Clean Clothes	.39
31. Getting Money Without Earning It	.55

Factor 8

ITEM	FACTOR LOADING
5. Cleaning Up After Work	.54
11. Helping Fix Things	.48

Factor 9

ITEM	FACTOR LOADING
14. Talking With Counselors	.62
18. Helping Someone Do Their Job Better	.47

*Item 22 loaded weakly on factors 2, 6 and 7

Table 5. Percent of variance and cumulative percent of variance accounted for by factors on the CREW Survey.

FACTOR	EIGENVALUE	PERCENT OF VARIANCE	CUMULATIVE PERCENT OF VARIANCE
1	8.22	45.5	45.5
2	3.18	17.6	63.1
3	1.27	7.0	70.1
4	1.25	6.9	77.0
5	1.14	6.3	83.3
6	.97	5.4	88.7
7	.76	4.2	92.9
8	.70	3.9	96.8
9	.59	3.2	100.0

The reader will note that the instrument has six factors which contain enough of the percent of variance of the inventory to be considered as test factors. These first six factors seem to be measuring the following:

Factor 1 - In School Activities - These inventory items measure the student's feelings toward the school environment.

Factor 2 - Interpersonal Relationship - These inventory items measure the student's interpersonal relationships among his peers, adults and teachers.

Factor 3 - Job Related or Job Activities - These inventory items measure the student's feelings pertaining to the activities of employment.

Factor 4 - Reward - These inventory items measure the student's feelings toward the rewards available at both school and on the job.

Factor 5 - Educational Skills for Work - These inventory items measure the student's needs for receiving information and skills pertaining to money management and occupational skills.

Factor 6 - Work Discipline - These inventory items measure the student's feelings toward rules and controls required for employment.

Summary of Results and Accomplishments

1. The project has produced a fairly promising inventory for this special needs population.

2. Ten color video tapes have been produced as a supplement to the curriculum.

3. Descriptive data indicate that the students are completing the program in a satisfactory manner.

4. Data indicate an average growth of one year for reading and an average growth of thirteen months in matehmatics.

5. A number of well structured forms have been developed for gathering evaluation data.

6. The project provides a model for the integration of EMR Resource Rooms and Special Vocational Education Units into a unified program.

7. Discipline problems among this group have been reduced.

8. The project provides a model for technical simulation approaches to curriculum development.

9. "It is the observation of the evaluation team that the Harding County Education Agency has and maintains one of the healthiest functioning relationships with its community that one could find anywhere." (Third Quarterly Third Party Evaluation Report, p. 6)

10. "As observed previously, the project staff has succeeded in organizing a group of informed and interested citizens into a highly functional and effective advisory committee." (Third Quarterly Third Party Evaluation Report, p. 7)

11. "It should be noted that the counseling component of the project was carefully scrutinized during the third quarter visit and was found to be making a positive impact on the progress and development of the students." (Third Quarterly Third Party Evaluation Report, p. 3)

12. A revised curriculum guide for this program is available. (See Appendix A)

CHAPTER V

EVALUATION RESULTS

On October 11, 1974, officials at the Hardin County Board of Education submitted a proposal to the U. S. Office of Education for the establishment of a porject expanding an existing vocational experiences curriculum. Their objective was to revamp the existing program to the degree that several missing (but deemed essential) components could be incorporated into a research design that would allow for controlled comparisons of the original and the revamped versions of the vocational experiences curriculum. In general terms, the primary purpose of the proposal was to provide the educable and disadvantaged students in the East and West Hardin school districts a continued program of pre-vocational experiences in a structure supplemented by basic reading and mathematical instruction and a specialized, highly interpersonal counseling component.

This proposal was subsequently funded by the U. S. Office and on August 22, 1975, a contract was entered into by the Hardin County Board of Education and the evaluation team. The evaluation conducted under that agreement was on the basis of a "third-party" concept and employed the following structure:

- evaluation at the process level for monitoring the system and its component parts in order to determine if process objectives were being carried out and to document departures from specified procedures;
- evaluation at the product level for examining the results of the project activities in terms of the physical entities produced and the behavioral changes produced; and

the employment of a feedback system providing information results at the product and process levels on which the project managers could base their decisions.

In all instances, the evaluation team approached the mutual objectives of the contract with a philosophy designed to improve the program and not simply to decide whether or not to continue the funding of the particular educational endeavor.

Review of Events

In an overview, the schedule of events entailed in this year-long evaluation was as follows:

Completion Date	Product/Activity
July 31, 1975	Finalize evaluation plans. Negotiate third-party evaluation contract.
September 16-17, 1975	On-site visit by third-party evaluators (Clemmons and Simmons).
September 30, 1975	Pre-test data delivered to third-party evaluator by project director.
September 30, 1975	First quarterly third-party evaluation report delivered to project director.
December 9-10, 1975	On-site visit by third-party evaluator (Clemmons).
December 31, 1975	Second quarterly third-party evaluation report delivered to project director.
March 15-16, 1976	On-site visit by third-party evaluators (Clemmons and Simmons).
March 30, 1976	Third quarterly third-party evaluation report delivered to project director.
April 15, 1976	Post-test data delivered to third-party evaluator by project director.
June 29, 1976	Final third-party evaluation report delivered to project director.
June 29-30, 1976	On-site presentation of evaluation results by third-party evaluators (Clemmons and Simmons).

In the opinion of the evaluators, the combination of on-site visits, pre and post-visit preparation sessions, and regular long-distance communications with the project staff, was sufficient for allowing the team to draw the conclusions presented in this document. Uninitiated readers, or those not familiar with the project itself, are encouraged to read the three previous quarterly team reports for a more complete understanding of the total evaluation process as it was conducted.

The Formative Evaluation

Although it will be described in more detail later, the summative evaluation for this project utilized a generalized null hypothesis with a corresponding list of variables for measurement purposes. The generalized null hypothesis was:

> There is no significant difference in (variable), as measured by (instrument), of a ninth grade treatment group exposed to a combination of a resource room, a technical simulation unit, and an integrated program of guidance and counseling and a ninth grade control group.

The list of variables examined in the summative evaluation (along with their corresponding performance objective and measuring instrument) is presented in the appropriate sections that follow.

As well, this report reviews the factors used to provide formative and implementive information during the first, second, and third quarters of the project's operation. In the opinion of the evaluation team, much progress was made in all of the factor areas since the inception of the project. Even a cursory review of the first three reports reveals a very definite metamorphosis of a project through the uncertainties of start-up to a well-organized, competent, smoothly functioning team effort. This clearly indicates the dedication of all involved with the project and substantiates their desire to accomplish its objectives. The follwing table graphically reinforces the progress record mentioned above.

Table 1. Summary of observations from on-site evaluation visits.

Factor	Score* September	December	March
A. Project Organization and Administration	2.5	4.0	4.0
B. Instructional Program	2.0	3.0[a]	4.0
C. Fiscal Management	4.0	4.0	4.0
D. Staff	2.5	3.5	3.5
E. Physical Facilities	3.0	3.0[a]	3.0
F. Learning Resources	2.0	3.0[a]	4.0
G. Community Relations	4.0	--[b]	4.0
H. Advisory Committee	2.0	3.5	5.0
Overall Mean	2.75	3.43	3.94

*On a scale of 1 to 5, where 1 = low, 5 = high.

[a]Limited observations on this factor.

[b]No observations made on this factor.

As mentioned, although the fourth quarterly report does not place major emphasis on evaluating the eight factors previously observed, the team felt it would be remiss in not making some final observations. Accordingly, a very limited review follows.

Project Organization and Administration

By the end of the third quarter, the team felt that the management of the project was fully functional. Potential continuance of the project should be greatly enhanced due to the management structure that evolved through this initial effort.

Instructional Program

Other than the comments made during the first three quarters, the team observed only that, in some instances, the objectives of the resource room

component were not being fully realized. Particular reference is made to the posttest data analysis which revealed no significant achievement in reading progress. The analysis did, however, reveal clearly significant gains in arithmetic achievement. The implications from this are not altogether clear (and no attempt is made here to generalize cause and effect) but this result should provide much food for thought should the project be continued or replicated elsewhere.

Fiscal Management

In the opinion of the team, the financial management of the project was excellent. The team noted that, at times, the disposition of finances for special projects can sometimes be accorded secondary or "back-burner" status. This was not the case in Hardin County. The project was fortunate to have had the expertise of the Hardin County School System financial officer.

Staff

Again, by the end of the third quarter, the staff appeared confident and competent. The team only reinforced to the project management that in-service training should continue to be a high priority in professional development--particularly with regard to some of the conclusions tentatively drawn from the data analysis.

Physical Facilities

With regard to physical facilities for the project, the team reminded the project management of its commitment to remedy the recognized, but still inadequate, conditions prevailing at East Hardin High.

Learning Resources

Data analysis gleaned from the posttest achievement scores suggest that materials and/or methodologies for increasing reading ability be carefully considered with regard to continuing the basic education portion of the project.

Community Relations

From the very beginning, one of the very most impressive facets of this investigation was the obvious commitment and support for the project emanating from the lay public. The time and resources contributed to this project by the general and surrounding communities of the Hardin County school district is rare indeed. The team commended this relationship highly and strongly encouraged the continuance of whatever is required to maintain this very excellent and healthy relationship that was observed and experienced.

Advisory Committee

Since the second quarter of operation, it was the opinion of the evaluation team that the project has greatly benefited from the formation and usage of an advisory committee. It proved to be a major asset in the project, and the team only inserted its desire to see the relationship continued.

The Summative Evaluation

The summative portion of the evaluation was concerned with examining the change, if any, over time on selected quantitative measures by those students exposed to the Vocational Experiences Curriculum (treatment group) as compared to those students receiving traditional instruction (control group). A description of the summative evaluation design and the results of the summative evaluation are presented in the sections that follow.

Design of the Summative Evaluation

The summative evaluation was built around the quasi-experimental approach and involved three schools receiving varying levels of the treatment and a control school. All four schools were pretested at the beginning of the school year and posttested at the end of the school year. Intelligence scores, to be used as covariants in the statistical analysis, were obtained for all four groups. The assignment of varying levels of treatment to the four schools is shown in Table 2.

Table 2. Assignment of treatment to schools.

School	Treatment Level	No. Students With Complete Data
East Hardin	Vocational Experience Curriculum, Resource Room, Technical Simulation Units, Guidance and Counseling	14
West Hardin	Vocational Experience Curriculum, Resource Room, Technical Simulation Units, Guidance and Counseling	36
North Hardin, Jr.	Resource Room	11
North Hardin	Control (Traditional Instruction)	7

Students at all four schools were tested in four areas--academic achievement, intelligence, personality, and attitude. Academic achievement was measured using the Wide Range Achievement Test (WRAT). This test provides three subscores in the areas of reading, spelling, and arithmetic. Intelligence was measured using both the Wechsler Intelligence Scale for Children and the Stanford-Binet. Common intelligence quotients were derived as equivalents of the Stanford-Binet using accepted conversion formulas.

The California Test of Personality (CTP) was used as a measure of self-concept. The CTP yields a total and six subtest scores in the area of personal adjustment and a total and six subtest scores in the area of social adjustment. A locally developed measure, the CREW survey, was used to measure students' attitudes. The CREW survey provides subscores for career education and general education plus a total score.

The WRAT, CTP, and CREW were administered to all four groups as pretests during September, 1975, and again as posttests during April, 1976. The measures of intelligence were administered during the Fall of 1975.

All data, as received from the project director, were coded and prepared for computer processing by the evaluation team. In testing for effects of varying levels of the treatment, the Analysis of Covariance was used in a 1 x 4 configuration. Intelligence scores and pretest scores were used as covariants in testing for statistical significance among the posttest means of the four groups. In cases where the f-ratio for differences among the four posttest means equaled or exceeded the .05 level of significance, Duncan's Multiple-Range Test was used to determine the significance of differences between individual pairs of means. Here again, differences were considered statistically significant when they equaled or exceeded the .05 level.

Results of the Summative Evaluation

For ease of presentation and as a convenience to the reader, the complete statistical tables will not be presented in this section. Instead, the data will be presented via narrative and summary tables. Complete statistical tables, however, are included in Chapter Attachment 1.

Twenty null hypotheses were tested in the areas of academic achievement, self-concept, and attitude toward work concepts. The general research hypothesis was that students exposed to a resource room, technical simulation units, guidance and counseling, and the vocational experience curriculum would demonstrate higher posttest scores than students exposed to traditional instruction.

Before presenting the results of the more formal statistical tests of differences between means of the four schools, it will be informative to examine the actual gains in raw scores for the four schools on the variables measured. Three comparisons dealt respectively with academic achievement in the areas of reading, spelling, and arithmetic. Table 3 presents the average gain in reading, spelling, and arithmetic for the four schools.

Table 3. Average unadjusted grade equivalent gain in Reading, Spelling, and Arithmetic by school between pretest and posttest.

School	Reading	Spelling	Arithmetic
East Hardin	0.8	0.3	0.9
West Hardin	0.8	0.2	1.1
North Hardin, Jr.	0.4	0.7	0.6
North Hardin	0.8	0.2	-0.2

Examination of Table 3 shows that average grade equivalent gains in reading were the same at East Hardin, West Hardin, and North Hardin schools, averaging 0.4 grade equivalent higher than at North Hardin Junior school. Grade equivalent gains in spelling were greatest at North Hardin Junior (0.7) and somewhat lower at East Hardin, West Hardin, and North Hardin schools (0.3, 0.2, 0.2, respectively). In the area of arithmetic, students at East

Hardin and West Hardin schools demonstrated higher average grade equivalent gains than students at either North Hardin Junior or North Hardin schools. In fact, students at North Hardin school averaged 0.2 grade equivalents lower on the posttest than on the pretest.

Students at the four schools were also compared on Personal Adjustment subscores of the CTP. Table 4 presents the results of those comparisons.

Table 4. Average unadjusted raw score gain in Personal Adjustment by subtest by school between pretest and posttest.

Subtest	East Hardin	West Hardin	North Hardin, Jr.	North Hardin
Self-Reliance	1.9	0.8	1.9	-2.2
Sense of Personal Worth	1.4	1.7	1.1	0.1
Sense of Personal Freedom	0.6	0.4	3.0	1.9
Feeling of Belonging	1.5	0.8	0.6	-1.7
Freedom From Withdrawing	2.2	1.4	3.5	2.0
Freedom From Nervous Symptoms	-0.5	0.1	2.3	-1.7
Personal Adjustment - TOTAL	7.1	5.2	12.3	-2.0

Data presented in Table 4 show that the raw score gain on Personal Adjustment was greatest at North Hardin Junior (12.3) and lowest at North Hardin (-2.0). Students at East and West Hardin schools gained 7.1 and 5.2, respectively. Comparison of gains in subtest scores within schools reveals that at East Hardin greatest gains were made in "Freedom From Withdrawing" and "Self-Reliance." Lowest gains were in "Freedom From Nervous Symptoms" and "Sense of Personal Freedom." At West Hardin school greatest gains were in "Sense of Personal Worth" and "Freedom From Withdrawing," while lowest gains were in "Freedom From Nervous Symptoms" and "Sense of Personal Freedom."

Students at North Hardin Junior school exhibited somewhat different results--their highest gains in "Freedom From Withdrawing" and "Sense of Personal Freedom," their lowest gains in "Feeling of Belonging" and "Sense of Personal Worth."

Additional comparisons were performed in the area of Social Adjustment. Table 5 presents the results of those comparisons.

Table 5. Average unadjusted raw score gain in Social Adjustment by subtest by school between pretest and posttest.

Subtest	East Hardin	West Hardin	North Hardin, Jr.	North Hardin
Social Standards	-0.8	-1.3	0.4	-1.9
Social Skills	0.5	0.9	0.3	1.1
Freedom From Anti-Social Tendencies	0.5	0.0	2.9	-1.8
Family Relations	0.1	0.8	2.6	-0.7
School Relations	-0.6	-0.2	1.2	0.9
Community Relations	0.5	1.8	-1.3	-3.2
Social Adjustment - TOTAL	0.3	2.1	6.4	-5.6

Results in Table 5 show that raw score gains in Social Adjustment were greatest at North Hardin Junior school (6.4) and lowest at North Hardin school (-5.6). Students at East Hardin school posted a gain of 0.3 while those at West Hardin school showed a gain of 2.1. An examination of subscore gains within schools shows that students at both East and West Hardin schools gained least on "Social Standards" and "School Relations" and greatest on "Social Skills" and "Community Relations." Students at North Hardin Junior school displayed a somewhat different pattern by gaining least on "Social Skills" and "Community Relations" and gaining most on "Freedom From Anti-Social Tendencies" and "Family Relations."

Finally, comparisons were made in the area of attitudes toward career education and general education. Table 6 presents the results of those comparisons.

Table 6. Average unadjusted gain on the CREW Survey by subtest by school between pretest and posttest.

Subtest	East Hardin	West Hardin	North Hardin, Jr.	North Hardin
Career Education	-1.8	-1.9	1.6	-5.1
General Education	-1.6	-1.2	1.1	3.4
CREW Survey - TOTAL	-3.5	-3.0	2.7	-1.7

A perusal of Table 6 indicates negative gain scores on the CREW survey for students at East Hardin, West Hardin, and North Hardin schools. Students at North Hardin Junior school showed a positive gain of 2.7 points. Subscore gains on the CREW survey for general education and career education showed no substantial variations from the total gain at either East Hardin, West Hardin, or North Hardin Junior schools. However, subscore gains at North Hardin school showed almost opposite changes with a 5.1 decrease on career education and a 3.4 increase in general education scores.

In addition to the inspection of actual gain scores for each of the 20 comparisons, more rigorous statistical tests were performed. Complete statistical tables are presented in the Appendix in addition to the summary which follows in Table 7.

Table 7. Summary of statistical comparisons of adjusted posttest means[a] by school.

Variable	East (E)	West (W)	North, Jr. (N, Jr.)	North (N)	Conclusion[b]
Reading	4.9	4.9	4.5	4.9	N.S.D.
Spelling	5.1	4.5	3.2	3.0	N.S.D.
Arithmetic	5.4	5.5	5.1	4.1	E=W=N,Jr. > N at .01 level
Self-Reliance	10.1	9.5	10.1	6.7	E=W=N,Jr. > N at .01 level
Sense of Personal Worth	10.2	10.6	9.6	8.1	N.S.D.
Sense of Personal Freedom	9.2	9.0	9.7	9.2	N.S.D.
Feeling of Belonging	10.9	11.1	10.6	7.3	E=W=N,Jr. > N at .01 level
Freedom From Withdrawing	8.5	7.7	8.8	7.7	N.S.D.
Freedom From Nervous Symptoms	7.9	8.5	10.4	6.8	N.S.D.
Personal Adjustment - TOTAL	57.0	55.7	60.4	46.4	N.S.D.
Social Standards	10.9	9.5	10.1	8.4	E=W=N,Jr. > N at .05 level
Social Skills	10.4	9.5	8.7	8.2	N.S.D.
Freedom From Anti-Social Tendencies	9.9	8.1	8.3	5.7	N.S.D.
Family Relations	9.7	9.7	10.5	7.4	N.S.D.
School Relations	8.5	8.2	7.6	8.1	N.S.D.
Community Relations	10.7	9.1	7.9	7.2	E=W > N,Jr.=N at .05 level
Social Adjustment - TOTAL	59.0	55.4	53.8	45.4	N.S.D.
Career Education	82.0	81.1	85.6	80.0	N.S.D.
General Education	34.7	35.2	37.6	39.3	N.S.D.
CREW Survey - TOTAL	115.7	116.2	119.4	124.4	N.S.D.

[a]Posttest means adjusted by covariants IQ and Pretest.

[b]Based on Analysis of Covariance.

Inspection of Table 7 reveals few instances of statistically significant differences among the 20 tests performed. Using the Analysis of Covariance to adjust for the effects of IQ and pretest scores, it can be seen in Table 7 that students in the treatment schools (East, West, and North Hardin Junior) scored significantly higher on arithmetic than students at the control school (North Hardin). The difference in adjusted posttest means was significant at the .01 level.

In the area of Personal Adjustment, adjusted posttest means were significantly higher in favor of the treatment schools on the subtests "Self-Reliance" and "Feeling of Belonging." The differences were statistically significant at the .01 level.

In the area of Social Adjustment, adjusted posttest means were significantly higher at the .05 level in favor of the treatment schools on the subtest "Social Standards." On the subtest "Community Relations," differences in adjusted posttest means were statistically significant at the .05 level in favor of East Hardin and West Hardin schools. No statistically significant difference existed between North Hardin Junior school and the control school.

In comparing adjusted posttest means among the four schools on the CREW survey, no statistically significant differences were found on either the career education subtest, the general education subtest, or the total score.

Considerations in Data Interpretations

Before entering into a discussion of the results of the evaluation, several crucial considerations must be pointed out. Any interpretation of data must be done in light of factors that most certainly impinged upon the results obtained.

First, the Expanded Vocational Experience Curriculum, by design, was in a developmental process. From the beginning of the in-school program in mid-September, 1975, until the posttesting in mid-April, 1976, constant changes, updates, and revisions were being made. By design, the program could most appropriately be subjected to a summative evaluation during a potential second year.

Second, it should be pointed out that only slightly better than six months elapsed between all group pretests and posttests. As a rule, nationally normed tests of generalized content such as the WRAT and the CTP are not designed to be sensitive to changes in specific areas of instruction over short periods of time. Here again, the results of a summative evaluation might show quite different results during a potential second year.

Third (and this point should never be overlooked), it is important to realize that statistically significant difference and "educationally significant" difference are two different concepts. Statistically significant difference is a device used by statisticians to make empirically sound decisions on the results of quantitative data analyses. On the other hand, "educationally significant" difference is the informed judgment of qualified educational programmers concerning the practical, observed difference between two groups of scores. In sound educational decision-making, both concepts should be taken under consideration before final verdicts are reached.

CHAPTER ATTACHMENT 1

DETAILED ANALYSES OF THE 20 HYPOTHESES TESTED IN THE SUMMATIVE EVALUATION

Table 1. Comparison of mean posttest scores by school on Reading grade equivalent.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	4.9	5.7	4.9	
West Hardin	36	76.9	4.3	5.1	4.9	0.86[a]
North Hardin, Jr.	11	65.6	2.8	3.2	4.5	
North Hardin	7	72.9	3.3	4.1	4.9	

[a]Not significant by Analysis of Covariance.

Table 2. Comparison of mean posttest scores by school on Spelling grade equivalent.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	4.8	5.1	4.2	
West Hardin	36	76.9	4.3	4.5	4.2	1.13[a]
North Hardin, Jr.	11	65.6	2.5	3.2	4.6	
North Hardin	7	72.9	2.8	3.0	4.4	

[a]Not significant by Analysis of Covariance.

Table 3. Comparison of mean posttest scores by school on Arithmetic grade equivalent.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	4.9	5.8	5.4	
West Hardin	36	76.9	4.6	5.7	5.5	4.49**
North Hardin, Jr.	11	65.6	3.6	4.2	5.1	
North Hardin	7	72.9	4.7	4.5	4.1	

** Significant at .01 level by Analysis of Covariance.
East Hardin = West Hardin = North Hardin, Jr > North Hardin at .01 level by Duncan's Multiple-Range test.

Table 4. Comparison of mean posttest scores by school on Personal Adjustment-Self Reliance.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	8.3	10.2	10.1	
West Hardin	36	76.9	8.8	9.6	9.5	4.83**
North Hardin, Jr.	11	65.6	7.6	9.5	10.1	
North Hardin	7	72.9	8.9	6.7	6.7	

** Significant at .01 level by Analysis of Covariance.
East Hardin = West Hardin = North Hardin, Jr. > North Hardin at .01 level by Duncan's Multiple-Range test.

Table 5. Comparison of mean posttest scores by school on Personal Adjustment-Sense of Personal Worth.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	9.1	10.5	10.2	
West Hardin	36	76.9	9.1	10.8	10.6	1.62[a]
North Hardin, Jr.	11	65.6	7.9	9.0	9.6	
North Hardin	7	72.9	7.0	7.1	8.1	

[a]Not significant by Analysis of Covariance.

Table 6. Comparison of mean posttest scores by school on Personal Adjustment-Sense of Personal Freedom.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	8.9	9.5	9.2	
West Hardin	36	76.9	8.9	9.3	9.0	0.14[a]
North Hardin, Jr.	11	65.6	5.6	8.6	9.7	
North Hardin	7	72.9	6.7	8.6	9.2	

[a]Not significant by Analysis of Covariance.

Table 7. Comparison of mean posttest scores by school on Personal Adjustment-Feeling of Belonging.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	9.6	11.1	10.9	
West Hardin	36	76.9	10.6	11.4	11.1	4.58**
North Hardin, Jr.	11	65.6	9.2	9.8	10.6	
North Hardin	7	72.9	8.3	6.6	7.3	

** Significant at .01 level by Analysis of Covariance.
East Hardin = West Hardin = North Hardin, Jr. > North Hardin at .01 level by Duncan's Multiple-Range test.

Table 8. Comparison of mean posttest scores by school on Personal Adjustment-Freedom From Withdrawing.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	6.9	9.1	8.5	
West Hardin	36	76.9	6.7	8.1	7.7	0.42[a]
North Hardin, Jr.	11	65.6	3.9	7.4	8.8	
North Hardin	7	72.9	5.0	7.0	7.7	

[a] Not significant by Analysis of Covariance.

Table 9. Comparison of mean posttest scores by school on Personal Adjustment-Freedom From Nervous Symptoms.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	8.9	8.4	7.9	
West Hardin	36	76.9	8.5	8.6	8.5	1.62[a]
North Hardin, Jr.	11	65.6	7.2	9.5	10.4	
North Hardin	7	72.9	8.4	6.7	6.8	

[a]Not significant by Analysis of Covariance.

Table 10. Comparison of mean posttest scores by school on Personal Adjustment-Total.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	51.6	58.7	57.0	
West Hardin	36	76.9	52.6	57.8	55.7	2.62[a]
North Hardin, Jr.	11	65.6	41.5	53.8	60.4	
North Hardin	7	72.9	44.3	42.3	46.4	

[a]Not significant by Analysis of Covariance.

Table 11. Comparison of mean posttest scores by school on Social Adjustment-Social Standards.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	12.2	11.4	10.9	
West Hardin	36	76.9	10.7	9.4	9.5	2.86*
North Hardin, Jr.	11	65.6	9.5	9.9	10.1	
North Hardin	7	72.9	10.0	8.1	8.4	

*Significant at .05 level by Analysis of Covariance.
East Hardin = West Hardin = North Hardin, Jr. > North Hardin at .05 level by Duncan's Multiple-Range test.

Table 12. Comparison of mean posttest scores by school on Social Adjustment-Social Skills.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	10.0	10.5	10.4	
West Hardin	36	76.9	8.6	9.5	9.5	1.37[a]
North Hardin, Jr.	11	65.6	8.4	8.7	8.7	
North Hardin	7	72.9	6.9	8.0	8.2	

[a]Not significant by Analysis of Covariance.

Table 13. Comparison of mean posttest scores by school on Social Adjustment-Freedom From Anti-Social Tendencies.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	9.6	10.1	9.9	
West Hardin	36	76.9	8.1	8.1	8.1	2.52[a]
North Hardin, Jr.	11	65.6	5.2	8.1	8.3	
North Hardin	7	72.9	7.7	5.9	5.7	

[a]Not significant by Analysis of Covariance.

Table 14. Comparison of mean posttest scores by school on Social Adjustment-Family Relations.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	10.1	10.2	9.7	
West Hardin	36	76.9	8.8	9.6	9.7	1.42[a]
North Hardin, Jr.	11	65.6	7.5	10.1	10.5	
North Hardin	7	72.9	7.7	7.0	7.4	

[a]Not significant by Analysis of Covariance.

Table 15. Comparison of mean posttest scores by school on Social Adjustment-School Relations.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	9.0	8.4	8.5	
West Hardin	36	76.9	8.5	8.3	8.2	0.12[a]
North Hardin, Jr.	11	65.6	6.3	7.5	7.6	
North Hardin	7	72.9	7.0	7.9	8.1	

[a]Not significant by Analysis of Covariance.

Table 16. Comparison of mean posttest scores by school on Social Adjustment-Community Relations.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	10.6	11.1	10.7	
West Hardin	36	76.9	8.4	10.2	9.1	3.36*
North Hardin, Jr.	11	65.6	8.9	7.6	7.9	
North Hardin	7	72.9	10.6	7.4	7.2	

*Significant at .05 level by Analysis of Covariance.
East Hardin = West Hardin > North Hardin, Jr. = North Hardin at .05 level by Duncan's Multiple-Range test.

Table 17. Comparison of mean posttest scores by school on Social Adjustment-Total.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	61.5	61.8	59.0	
West Hardin	36	76.9	53.0	55.1	55.4	2.33[a]
North Hardin, Jr.	11	65.6	45.6	52.0	53.8	
North Hardin	7	72.9	49.9	44.3	45.4	

[a]Not significant by Analysis of Covariance.

Table 18. Comparison of mean posttest scores by school on the Career Education and Work Subtest of the CREW Survey.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	85.9	84.1	82.0	
West Hardin	36	76.9	81.7	79.8	81.1	0.95[a]
North Hardin, Jr.	11	65.6	82.9	84.5	85.6	
North Hardin	7	72.9	89.1	84.0	80.0	

[a]Not significant by Analysis of Covariance.

Table 19. Comparison of mean posttest scores by school on the General Education Subtest of the CREW Survey.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	38.6	37.0	34.7	
West Hardin	36	76.9	36.8	35.6	35.2	1.00[a]
North Hardin, Jr.	11	65.6	33.2	34.3	37.6	
North Hardin	7	72.9	34.0	37.4	39.3	

[a]Not significant by Analysis of Covariance.

Table 20. Comparison of mean posttest scores by school on the CREW Survey-Total.

School	n	Mean IQ	Mean Pretest	Mean Posttest	Adjusted Mean Posttest	f-ratio
East Hardin	14	82.0	124.6	121.1	115.7	
West Hardin	36	76.9	118.4	115.4	116.2	1.08[a]
North Hardin, Jr.	11	65.6	116.1	118.8	119.4	
North Hardin	7	72.9	123.1	121.4	124.4	

[a]Not significant by Analysis of Covariance.

CHAPTER ATTACHMENT 2

PRELIMINARY INFORMATION SURVEY

Preliminary Information Survey

A component of a comprehensive third-party evaluation for the project entitled:

"A Research Project for Expanding the Present Vocational Experiences Curriculum"

Conducted by:
The Hardin County Board of Education
Elizabethtown, Kentucky

Evaluation Team:
Jesse S. Clemmons, Principal Investigator
Danny J. Simmons, Investigator

Preliminary Information Survey

(Hardin County Vocational Education Project)

1. INDIVIDUAL STUDENT GROWTH

   a. What effect is the current project anticipated to have on student performance?

   b. How will the project affect the number and type of learning experiences and/or skills to which the student will be exposed?

   c. What effect on attitudes could be attributed to the project (i.e., community, students, teachers, administrators)? Are there experiences which assist the students in the development of their self-concepts and their ability to relate to other individuals?

2. PROGRAM OPERATIONS

   a. What evidence, if any, indicates the program might achieve the required objectives of the project?

b. What "spin-off" benefits might be realized from this project that are not a part of the original objectives?

3. SOCIAL AND OCCUPATIONAL CONSIDERATIONS

a. How does the current project include activities which might contribute to employment and satisfaction on the job?

b. What effect might the project have in relation to such items as wages and occupational mobility?

c. What benefits should accrue to the system and the community as a result of the project. What effect, if any, should the project have on such items as school and community relations and the public image of the institution?

4. CREDIBILITY

a. Will this project result in a saving or a more efficient usage of the taxpayer's dollar?

b. Can this project be funded within the normal LEA budget allocation? If not, what are the possibilities of reallocating present budget items to accommodate installation with local funds only?

5. TIME CONSIDERATIONS

a. How much time did/will it take to plan the project? How much time is anticipated for implementation of the project?

b. How much time does the project require be devoted to planning by a teacher, coordinator, or administrator during each week?

c. What amount of time is required by the project in daily preparation, classroom activities, meetings, etc., for the teacher(s)?

6. PROGRAM CONSIDERATIONS

a. What resistance, if any, might be anticipated from the community, system personnel, or students concerning the installation of the project on a permanent basis?

b. How many staff members, teachers, directing teachers, classrooms, laboratories, or schools need to be involved?

c. Does the current project require any changes in policy at the state and local level in order for the project to be successful and adopted on a full-time basis?

d. Is the project, as currently constituted, in installable form at this point or does it require more development? Are additional materials or training activities necessary?

e. What evidence, if any, is there that this project might work in other sites or situations?

7. ORGANIZATIONAL CONSIDERATIONS

a. What interruption of routine might be required by the project due to scheduling, sharing of facilities, or overextension of personnel?

b. What effect might the project have on the present local structure? Will it create a need for a separate division or department?

What changes in duties or responsibilities of system personnel might be necessary for successful continued operation of the project?

8. MANPOWER REQUIREMENTS

a. What additions, if any, to the local staff might be required? How many part-time or full-time people per system will be needed to implement this project?

b. Is the present staff capable of and willing to handle the development necessary for the success of the project? Are consultants readily available?

9. EQUIPMENT CONSIDERATIONS

What are the major items of equipment and supplies (or their components) necessary for the operation and success of the project?

CHAPTER ATTACHMENT 3

ON-SITE OBSERVATION SCHEDULE

ON-SITE OBSERVATION SCHEDULE

Developed For a Project Entitled:

"A Research Project for Expanding the Present Vocational Experience Curriculum"

Conducted By:

The Hardin County Board of Education

Elizabethtown, Kentucky

By:

The Third-Party Evaluation Team

Jesse S. Clemmons, Principal Investigator

Dan J. Simmons, Investigator

ON-SITE OBSERVATION SCHEDULE

Directions: Under each project factor listed, assign a rating of "1" to "5" to each criteria, where "1" denotes a low or unsatisfactory score and "5" denotes a high or satisfactory score. After rating each criteria for a given factor, compute the mean of all criteria scores for that factor and enter in the box labeled "Factor Mean Score."

FACTOR I. PROJECT ORGANIZATION AND ADMINISTRATION

A. Planning - - -

FACTOR II. INSTRUCTIONAL PROGRAM

A. Scope, Definition -

B. Suitability to Target Population - - - - - - - - - - - - - - - - -

C. Objectives -

D. Local Evaluation Measures -

E. Transportability -

Factor Mean Score

FACTOR III. FISCAL MANAGEMENT

A. Accountability System -

B. Transaction Ease -

Factor Mean Score

FACTOR IV. STAFF

A. Commitment - - -

FACTOR V. PHYSICAL FACILITIES

A. Adequacy - - -

FACTOR VII. COMMUNITY RELATIONS

A. Media Usage - - -

ON-SITE OBSERVATION SCHEDULE

Observation Summary

Factor	Mean Score
I. Project Organization and Administration	_____
II. Instructional Program	_____
III. Fiscal Management	_____
IV. Staff	_____
V. Physical Facilities	_____
VI. Learning Resources	_____
VII. Community Relations	_____
VIII. Advisory Committee	_____
Overall Mean	[ ]

Date of Observation:

- [ ] September, 1975
- [ ] December, 1975
- [ ] March, 1976

Observer:

_____

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The formative and implementative evaluation portions of the project factors (excluding the student achievement variables) resulted in conclusions generally favorable to the project as a developmental effort. Analysis of the eight factors (administration, instruction, finance, staff, facilities, learning resources, community relations, and advisor usage) reveals a record of gradual improvement which reinforces the true developmental nature of the project. Documented, quarterly investigations served to substantiate this.

Regardless, several observations must be made concerning the development and conduct of the project. Briefly, these are:

1. There was inadequate or inappropriate usage of the time which elapsed between grant award and start-up for the project.
2. Critical staff development and orientation activities for the project occurred, initially, in a random or haphazard manner; and,
3. The utilization of advisory groups for guidance in determining directions for the project occurred much later than generally desirable.

In the summative portion of the evaluation four of the 20 hypotheses tested resulted in conclusions favorable to the treatment schools (East Hardin, West Hardin, North Hardin Junior). One additional hypothesis tested resulted in a conclusion favorable to the treatment of East Hardin and West Hardin schools. The remaining 15 or the 20 hypotheses tested resulted in the conclusion of no significant difference between treatment and control groups. In discussing the findings it should be pointed out that in none of the comparisons did the treatment produce a negative effect, i.e., in no cases were the scores of the control group significantly higher than those of the treatment groups.

Adjusted pottest means on arithmetic were significantly higher for the three treatment schools than for the control school. In fact, arithmetic was the only portion of the treatment directly connected with the resource room in which significant differences were observed. Indications are that future development efforts should concentrate on further refining and improving that portion of instruction delivered through the resource room strategy which most directly relates to reading and spelling.

Significantly different adjusted posttest means for student self-concept as measured by the CTP were noted for four of the 12 subtests. In the area of Personal Adjustment, significant differences, in favor of the treatment groups, were found for the subtests "Self-Reliance" and "Feeling of Belonging." In Social Adjustment, significant differences, in favor of the treatment groups, were found for the subtests "Social Standards" and "Community Relations." No apparent trend seemed to exist in the findings. However, it should be noted that, with the exception of one instance, every adjusted posttest mean of the treatment groups was higher than the corresponding adjusted posttest mean for the control group even though all differences were not statistically significant.

Analysis of adjusted posttest mean scores on the CREW survey indicated the treatment was having no effect on student attitudes. This is somewhat surprising in that a major objective of the project dealt with improvement of student attitudes toward both work concepts and school in general. Further in-depth analysis would be required to determine the exact cause.

In general, the findings of the summative evaluation were less than supportive of the project treatment. In addition, it should be noted that the North Hardin Junior school students' performance equaled that of the students at both East and West Hardin schools. The resource room concept, being the common denominator at all three schools, appears likely to be the

greatest contributor to this effect. Further speculation would surmise that any favorable effects observed at the East and West Hardin schools could just as likely be attributed to their respective resource rooms. Additional research would be necessary to adequately document the true effectiveness of the resource room concept.

RECOMMENDATIONS

As a result of this research, the following recommendations are made:

1. The guidelines which have been developed through this project should be disseminated for use by educational administrators who develop programs for disadvantaged and handicapped (exceptional)populations.

2. Teachers who are beginning exceptional vocational education programs should have a comprehensive period of in-service preparation.

3. Community members should play major roles in the pre-service and in-service program.

4. Teachers should be involved to a considerable extent in developing and evaluating in-service programs for exceptional vocational education programs.

5. The guidelines which have been developed should be tested further for reliability and validity by using them in other exceptional vocational education programs.

6. A model in-service education program should be developed for preparing exceptional vocational education teachers.

As a result of the data gathered from directors, teachers, and the lay public, the following guidelines are suggested for use by school administrators who develop exceptional vocational education programs. These suggested guidelines are placed in logical order rather than in rank of importance.

GUIDELINES FOR EXCEPTIONAL VOCATIONAL EDUCATION PROGRAMS

1. Ample time should be allotted for open discussion to gain commitment to exceptional vocational education, increase understanding of its concepts, and encourage productive participation in the program.

2. Opportunities should be given teachers from divergent disciplines to interact and relate in a cooperative manner by bringing them together in small mixed groups.

3. Teachers should be encouraged as much as possible to create, innovate, and share ideas for teaching.

4. A considerable number of students, parents, community members, and employers should discuss employment opportunities and serve in an advisory capacity during the program, thereby increasing involvement with teachers.

5. Vocational teachers should take leadership roles in the program to inform other teachers, counselors, students, and parents about the advantages and importance of vocational education for the exceptional student and the opportunities available for obtaining meaningful employment.

6. To gain a true understanding of the working world, teachers should spend as much time as possible visiting community/employer sites to discuss work and view workers of different types.

7. Teachers in exceptional vocational education programs should be instructed in developing job-related activities, performance objectives, role playing, work simulation, student-directed learning, and individualized instruction.

8. Exceptional vocational education teachers should have guidance/counseling instruction comprehensive enough to provide insight about the working world. As well, each teacher should develop skill in assisting students to assess interests/abilities, obtain work experience, and for entering other vocational programs.

9. A wide variety of employment related resource materials and the services of an information specialist should be available throughout the program.

10. Teachers should have sufficient released time from teaching to pursue specialized in-service activities which should be scheduled frequently throughout the year.

11. Continuing opportunities should be given exceptional vocational education teachers for planning and choosing in-service activities that meet their needs and desires.

12. Whenever possible, research findings should provide a continued base for developing in-service activities that will improve teacher/student performance.

13. Recognition of some type should be given to exceptional vocational education teachers who increase their effort or improve performance as a result of in-service activity

APPENDIX A

REVISED CURRICULUM FOR THE
VOCATIONAL EXPERIENCE CLASSES
GRADE 9

THIS MATERIAL IS AVAILABLE IN A SEPARATE BOOKLET.

APPENDIX B

TEACHER OBSERVATION

TEACHER OBSERVATION FORM

NAME OF STUDENT _____

SCHOOL _____ DATE _____

PERIOD OF OBSERVATION _____

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
1. Out-of Seat-Behavior- (See Directions for Charting Behavior)	5 4 3 2 1	
2. Inappropriate Verbalization - (See Directions for Charting Behavior)	5 4 3 2 1	
3. Profanity - (See Directions for Charting Behavior)	5 4 3 2 1	
4. Punctuality - (See Directions for Charting Behavior)	5 4 3 2 1	
5. Defacing Classroom Property - (See Directions for Charting Behavior)	5 4 3 2 1	
6. Awareness: The student exhibited an awareness that different workers need varying skill preparation for success.	5 4 3 2 1	
7. Awareness. The student exhibited an awareness of the requirements needed to complete the simulation unit.	5 4 3 2 1	
8. Awareness: The student completed the basic skills for the simulation unit.	5 4 3 2 1	
9. Attendance: The student had satisfactory attendance.	5 4 3 2 1	
10. Personal Courtesy: The student practiced basic courtesy to adults and peers.	5 4 3 2 1	
11. Personal Hygiene: The student practiced positive personal hygiene habits.	5 4 3 2 1	

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
12. Self-Concept: The student exhibited through his behavior growth in terms of a positive self-concept.	5 4 3 2 1	
13. Cooperation: The student demonstrated a satisfactory level of cooperation with their peers and adults.	5 4 3 2 1	
14. Communication Skills: The student was able to understand and follow oral and written directions.	5 4 3 2 1	
15. Appreciation of Work: The student demonstrated an appreciation for work by performing satisfactorily the classroom jobs	5 4 3 2 1	

TOTAL RAW SCORE _____

MEAN SCORE (Divide Raw Score by 15) _____

APPENDIX C

RATING CRITERIA FOR TEACHER OBSERVATION FORM

RATING CRITERIA FOR TEACHER OBSERVATION FORM

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
1. Out-of-Seat-Behavior - (See Directions for Charting Behavior)	5 4 3 2 1	
2. Inappropriate Verbalization - (See Directions for Charting Behavior)	5 4 3 2 1	
3. Profanity - (See Directions for Charting Behavior)	5 4 3 2 1	
4. Punctuality - (See Directions for Charting Behavior)	5 4 3 2 1	
5. Defacing Classroom Property - (See Directions for Charting Behavior)	5 4 3 2 1	

The rating criteria for the first five areas will be developed from the charted behavior reports. Vocational experience teachers began charting this behavior on Monday, September 15th. The rating standards will be determined on the data from the first monthly report. All other reports will be compared from this original information. The standards will be computed separately for each of the five areas using the following criteria:

5 - A score of five will be at least two standard deviations above the mean.
4 - A score of four will be at least one standard deviation above the mean.
3 - A score of three will be in the range of one deviation above or below the mean.
2 - A score of two will be more than one standard deviation below the mean.
1 - A score of one will be more than two standard deviations below the mean.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
6. Awareness: The student exhibited an awareness that different workers need varying skill preparation for success.	5 4 3 2 1	

5 - A score of five is given to students who achieve a high degree of competency in terms of exercises, class discussion, and role playing situations pertaining to a knowledge of different worker skills. In this respect, the student should be at least 85% accurate.
4 - A score of four is given to students who achieve a good degree of competency in terms of exercises, class discussion and role playing situations pertaining to a knowledge of different worker skills. In this respect, the student should be at least 75% accurate.

3 - A score of three is given to students who achieve an average degree of competency in terms of exercises, class discussion and role playing situations pertaining to a knowledge of different worker skills. In this respect, the student should be at least 50% accurate.
2 - A score of two is given to students who achieve a poor degree of competency in terms of exercises, class discussion and role playing situations pertaining to a knowledge of different worker skills. In this respect, the student should be at least 35% accurate.
1 - A score of one is given to students who achieve an extremely poor degree of competency in terms of exercises, class discussion and role playing situations pertaining to a knowledge of different worker skills. In this respect, the students should be below a 35% accuracy level.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
7. Awareness: The student exhibited an awareness of the requirements needed to complete the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who have a competency rate of 85% or better on class activities pertaining to simulation unit requirements.
4 - A score of four is given to students who have a competency rate between 75% and 85% on class activities pertaining to simulation unit requirements.
3 - A score of three is given to students who have a competency rate between 50% and 75% on class activities pertaining to simulation unit requirements.
2 - A score of two is given to students who have a competency rate between 35% and 50% on class activities pertaining to simulation unit requirements.
1 - A score of one is given to students who have a competency rate below 35% on class activities pertaining to simulation unit requirements.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
8. Awareness: The student completed the basic skills for the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who made five errors or less on the practice trials of the simulation unit.
4 - A score of four is given to students who made between ten and five errors on the practice trials of the simulation unit.
3 - A score of three is given to students who made between fifteen and ten errors on the practice trials of the simulation unit.
2 - A score of two is given to students who made between twenty and fifteen errors on the practice trials of the simulation unit.
1 - A score of one is given to students who made more than twenty errors on the practice trials of the simulation unit.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
9. Attendance: The student had satisfactory attendance.	5 4 3 2 1	

5 - A score of five is given to students who are present at least 95% of the time.
4 - A score of four is given to students who are present at least 92% of the time.

3 - A score of three is given to students who are present at least 90% of the time.
2 - A score of two is given to students who are present at least 85% of the time.
1 - A score of one is given to students who are present less than 85% of the time.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
10. Personal Courtesy: The student practiced basic courtesy to adults and peers.	5 4 3 2 1	

5 - A score of five is given to students who made five observed errors or leas in terms of basic courtesy.
4 - A score of four is given to students who made between ten and five observed errors in terms of basic courtesy.
3 - A score of three is given to students who made between fifteen and ten observed errors in terms of basic courtesy.
2 - A score of two is given to students who made between twenty and fifteen observed errors in terms of basic courtesy.
1 - A score of one is given to students who made more than twenty observed errors in terms of basic courtesy.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
11. Personal Hygiene: The student practiced positive personal hygiene habits.	5 4 3 2 1	

5 - A score of five is given to students who display at all times proper dress and good grooming.
4 - A score of four is given to students who display most of the time proper dress and good grooming.
3 - A score of three is given to students who display half of the time proper dress and good grooming.
2 - A score of two is given to students who display less than half of the time proper dress and good grooming.
1 - A score of one is given to students who have totally unsatisfactory dress and grooming habits.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
12. Self-Concept: The student exhibited through his behavior growth in terms of a positive self-concept.	5 4 3 2 1	

5 - A score of five is given to students who demonstrate behavior that reflects a high degree of self-acceptance and self-regard.
4 - A score of four is given to students who demonstrate behavior that reflects a good degree of self-acceptance and self-regard.
3 - A score of three is given to students who demonstrate behavior that reflects an average degree of self-acceptance and self-regard.
2 - A score of two is given to students who demonstrate behavior that reflects a poor degree of self-acceptance and self-regard.
1 - A score of one is given to students who demonstrate behavior that reflects an extremely poor degree of self-acceptance and self-regard.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
13. Cooperation: The student demonstrates a satisfactory level of cooperation with their peers and adults	5 4 3 2 1	

5 - A score of five is given to students who have been cooperative all of the time
4 - A score of four is given to students who have been cooperative most of the time
3 - A score of three is given to students who have been cooperative half of the time
2 - A score of two is given to students who have been cooperative less than half of the time.
1 - A score of one is given to students who have been totally uncooperative.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
14. Communication Skills: The student was able to understand and follow oral and written directions.	5 4 3 2 1	

5 - A score of five is given to students who are able to understand all directions at least 85% of the time.
4 - A score of four is given to students who are able to understand all directions at least 70% of the time.
3 - A score of three is given to students who are able to understand all directions at least 50% of the time.
2 - A score of two is given to students who are able to understand all directions at least 35% of the time.
1 - A score of one is given to students who are able to understand all directions leas than 35% of the time.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
15. Appreciation of Work: The student demonstrated an appreciation for work by performing satisfactorily the classroom jobs.	5 4 3 2 1	

5 - A score of five is given to students who complete their classroom jobs in a satisfactory manner at least 90% of the time.
4 - A score of four is given to students who complete their classroom jobs in a satisfactory manner at least 80% of the time.
3 - A score of three is given to students who complete their classroom jobs in a satisfactory manner at least 70% of the time.
2 - A score of two is given to students who complete their classroom jobs in a satisfactory manner at least 60% of the time.
1 - A score of one is given to students who complete their classroom jobs in a satisfactory manner less than 60% of the time.

APPENDIX D

PERFORMANCE CHECKLIST

PERFORMANCE CHECKLIST

NAME OF STUDENT _____

NAME OF EVALUATOR _____

SCHOOL _____ DATE _____

CLASS PERIOD _____ MEAN SCORE _____

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
1. Awareness: The student understood the basic skills required for the simulation unit.	5 4 3 2 1	
2. Preparation: The student completed the preparation exercises for the basic skills required for the simulation unit.	5 4 3 2 1	
3. Work Requirements: The student demonstrated his understanding of the work requirements needed for the simulation unit.	5 4 3 2 1	
4. Laboratory Experiences: The student worked well with his peers during the simulation unit.	5 4 3 2 1	
5. Laboratory Experiences: The student demonstrated leadership roles during the simulation unit.	5 4 3 2 1	
6. Laboratory Experiences: The student completed the practice trials required for the simulation unit.	5 4 3 2 1	
7. Laboratory Experiences: The student assisted his fellow workers during the simulation unit.	5 4 3 2 1	
8. Laboratory Experiences: The student asked meaningful questions during the simulation unit.	5 4 3 2 1	
9. Laboratory Experiences: The student demonstrated the ability to move the fingers and manipulate small objects with the fingers during the simulation unit.	5 4 3 2 1	

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
10. Laboratory Experiences: The student demonstrated the ability to move the hands easily and skillfully.	5 4 3 2 1	

1. TOTAL RAW SCORE _____

2. MEAN SCORE (Divide Raw Score by 10) _____

APPENDIX E

SCORING CRITERIA FOR PERFORMANCE CHECKLIST

SCORING CRITERIA FOR THE PERFORMANCE CHECKLIST

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
1. Awareness: The student understood the basic skills required for the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who perform 85% or better in terms of accuracy on class activities pertaining to basic skills requirements.
4 - A score of four is given to students who perform between 70% and 85% in terms of accuracy on class activities pertaining to basic skills requirements.
3 - A score of three is given to students who perform between 50% and 70% in terms of accuracy on class activities pertaining to basic skills requirements.
2 - A score of two is given to students who perform between 35% and 50% in terms of accuracy on class activities pertaining to basic skills requirements.
1 - A score of one is given to students who perform below 35% in terms of accuracy on class activities pertaining to basic skills requirements.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
2. Preparation: The student completed the preparation exercises for the basic skills required for the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who perform 85% or better in terms of accuracy on preparation exercises for the basic skills.
4 - A score of four is given to students who perform between 70% and 85% in terms of accuracy on preparation exercises for the basic skills.
3 - A score of three is given to students who perform between 50% and 70% in terms of accuracy on preparation exercises for the basic skills.
2 - A score of two is given to students who perform between 35% and 50% in terms of accuracy on preparation exercises for the basic skills.
1 - A score of one is given to students who perform below 35% in terms of accuracy on preparation exercises for the basic skills.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
3. Work Requirements: The student demonstrated his understanding of the work requirements needed for the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who have a competency rate of 85% or better on class activities pertaining to work requirements.
4 - A score of four is given to students who have a competency rate between 75% and 85% on class activities pertaining to work requirements.
3 - A score of three is given to students who have a competency rate between 50% and 75% on class activities pertaining to work requirements.
2 - A score of two is given to students who have a competency rate between 35% and 50% on class activities pertaining to work requirements.
1 - A score of one is given to students who have a competency rate below 35% on class activities pertaining to work requirements.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
4. Laboratory Experiences: The student worked well with his peers during the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who demonstrate cooperation with his peers approximately 95% of the time.
4 - A score of four is given to students who demonstrate cooperation with his peers approximately 75% of the time.
3 - A score of three is given to students who demonstrate cooperation with his peers approximately 50% of the time.
2 - A score of two is given to students who demonstrate cooperation with his peers approximately 25% of the time.
1 - A score of one is given to students who demonstrate a totally unsatisfactory degree of cooperation with his peers.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
5. Laboratory Experiences: The student demonstrated leadership roles during the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who demonstrate leadership with his peers approximately 95% of the time.
4 - A score of four is given to students who demonstrate leadership with his peers approximately 75% of the time.
3 - A score of three is given to students who demonstrate leadership with his peers approximately 50% of the time.
2 - A score of two is given to students who demonstrate leadership with his peers approximately 25% of the time.
1 - A score of one is given to students who demonstrate a totally unsatisfactory degree of leadership with his peers.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
6. Laboratory Experiences: The student completed the practice trials required for the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who made five errors or less on the practice trials of the simulation unit.
4 - A score of four is given to students who made between ten and five errors on the practice trials of the simulation unit.
3 - A score of three is given to students who made between fifteen and ten errors on the practice trials of the simulation unit.
2 - A score of two is given to students who made between twenty and fifteen errors on the practice trials of the simulation unit.
1 - A score of one is given to students who made more than twenty errors on the practice trials of the simulation unit.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
7. Laboratory Experiences: The student assisted his fellow workers during the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who assist their fellow workers whenever the opportunity arises.
4 - A score of four is given to students who often assist their fellow workers.
3 - A score of three is given to students who about half the time assist their fellow workers.
2 - A score of two is given to students who seldom assist their fellow workers.
1 - A score of one is given to students who never assist their fellow workers.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
8. Laboratory Experiences: The student asked meaningful questions during the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who frequently ask questions pertaining to the topic.
4 - A score of four is given to students who often ask questions pertaining to the topic.
3 - A score of three is given to students who ask some questions pertaining to the topic.
2 - A score of two is given to students who rarely ask questions pertaining to the topic.
1 - A score of one is given to students who never ask questions pertaining to the topic.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
9. Laboratory Experiences: The student demonstrated the ability to move the fingers and manipulate small objects with the fingers during the simulation unit.	5 4 3 2 1	

5 - A score of five is given to students who demonstrate a high degree of finger dexterity in terms of manipulating small objects with the fingers with five errors or less.
4 - A score of four is given to students who demonstrate a good degree of finger dexterity in terms of manipulating small objects with ten to five errors.
3 - A score of three is given to students who demonstrate an average degree of finger dexterity in terms of manipulating small objects with fifteen to ten errors.
2 - A score of two is given to students who demonstrate a poor degree of finger dexterity in terms of manipulating small objects with twenty to fifteen errors.
1 - A score of one is given to students who demonstrate an extremely poor degree of finger dexterity in terms of manipulating small objects with more than 20 errors.

SPECIFIC CRITERIA	RATING BEST TO LEAST	REMARKS
10. Laboratory Experiences: The student demonstrated the ability to move the hands easily and skillfully.	5 4 3 2 1	

5 - A score of five is given to students who demonstrate a high degree of manual dexterity in terms of moving the hands easily and skillfully. (five errors or less)

4 - A score of four is given to students who demonstrate a good degree of manual dexterity in terms of moving the hands easily and skillfully. (six to ten errors)

3 - A score of three is given to students who demonstrate an average degree of manual dexterity in terms of moving the hands easily and skillfully. (eleven to fifteen errors)

2 - A score of two is given to students who demonstrate a poor degree of manual dexterity in terms of moving the hands easily and skillfully. (sixteen to twenty errors)

1 - A score of one is given to students who demonstrate an extremely poor degree of manual dexterity in terms of moving the hands easily and skillfully. (more than twenty errors)

APPENDIX F

DIRECTIONS FOR CHARTING BEHAVIOR

DIRECTIONS FOR CHARTING BEHAVIOR

1. Charting applies to ninth grade classes only.

2. Behaviors to be charted are defined on Page 2.

3. It is very important that the rater thoroughly understand the process and criteria before the first day of measurement. A conference between the classroom teacher and the rater will be conducted prior to the first day of measurement.

4. Behavior charting will occur three days per week. It is extremely important that careful records be maintained and that each incident of behavior be recorded at the time when it occurs.

5. Cumulative charts for each of the five behaviors should be filled out at the end of each day. All ninth grade classes will be recorded on one chart.

BEHAVIORS TO BE CHARTED

1. Out-of-Seat-Behavior

   This catagory should be checked anytime that a student leaves his seat during a time when he is expected to remain at his desk or table.

2. Inappropriate Verbalization

   This catagory should be charted whenever a student speaks either to other students or to the teacher/aide when he is expected to be listening or working independently. Criteria for this catagory will be further discussed during the rater training session.

3. Profanity

   This catagory should be charted whenever the student uses profane language either in the classroom or during a supervised field trip.

4. Punctuality

   To be charted by the teacher.

5. Defacing Classroom Property

   To be charted by the teacher.

APPENDIX G

BEHAVIOR CHARTING FORM

BEHAVIOR AREA _____

TEACHER _____ SECTION _____

STUDENT NAME																		